

## DAFTAR PUSTAKA

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**L**

**A**

**M**

**P**

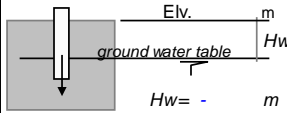
**I**

**R**

**A**

**N**

# JC01

<p><b>Land Side</b></p>  <p>Climate : Sunny</p>	<p>Bor Hole No. : BH-1</p> <p>Date from : 27-02-2022 to : 1-03-2022</p> <p>Total Depth : 16 m</p> <p>Inclination : 90°</p> <p>Casing Diameter : HQ, NQ</p> <p>Dropping Distc. : 75 cm</p>	<p>Legend :</p> <table style="width: 100%;"> <tr> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul> </td> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul> </td> <td style="width: 33%; text-align: center;"> <p>✕ SPT</p> </td> </tr> </table>	<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<p>✕ SPT</p>	<p>Soil Penetration Test</p>
<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<p>✕ SPT</p>				

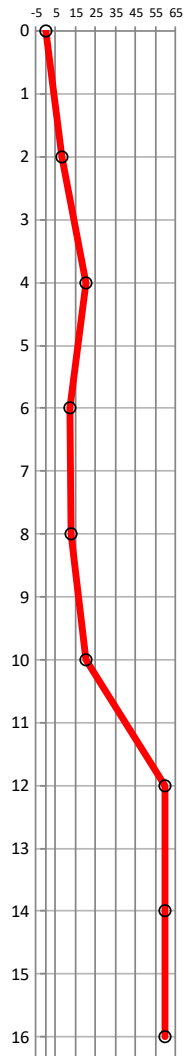
Elev. (m)	Depth (m)	Type Of Test	Sample Depth (m)	No. of Blows / Penetration (cm)			N <sub>SPT</sub>	LOG	SOIL DESCRIPTION	GRAPHIC SPT				
				1st	2nd	3rd								
312.00	0.00						0							
311.50	-0.50													
311.00	-1.00													
310.50	-1.50													
310.00	-2.00	SPT	2.00 - 2.45	3	15	4	15	4	15	8	30	✕		
309.50	-2.50													
309.00	-3.00	UDS	3.00 - 3.50											
308.50	-3.50													
308.00	-4.00	SPT	4.00 - 4.45	4	15	5	15	5	15	20	30	✕		
307.50	-4.50													
307.00	-5.00	UDS	5.00 - 5.50											
306.50	-5.50													
306.00	-6.00	SPT	6.00 - 6.45	4	15	5	15	7	15	12	30	✕		
305.50	-6.50													
305.00	-7.00													
304.50	-7.50													
304.00	-8.00	SPT	8.00 - 8.45	4	15	7	15	6	15	13	30	✕		
303.50	-8.50													
303.00	-9.00	UDS	9.00 - 9.50											
302.50	-9.50													
302.00	-10.00	SPT	10.00 - 10.45	5	15	9	15	11	15	20	30	✕		
301.50	-10.50													
301.00	-11.00													
300.50	-11.50													
300.00	-12.00	SPT	12.00 - 12.45	10	15	23	15	37	15	60	30	✕		
299.50	-12.50													
299.00	-13.00													
298.50	-13.50													
298.00	-14.00	SPT	14.00 - 14.45	20	15	33	15	27	15	60	30	✕		
297.50	-14.50													
297.00	-15.00													
296.50	-15.50													
296.00	-16.00	SPT	16.00 - 16.45	29	15	36	15	24	15	60	30	✕		

Soil lempung dengan warna coklat tua

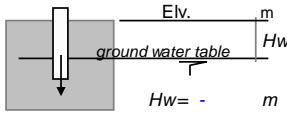
Material didominasi pasir, lempung, kerikil dan kerakal berwarna coklat kehijauan

8 m

End Drilling 16 m



# JC02

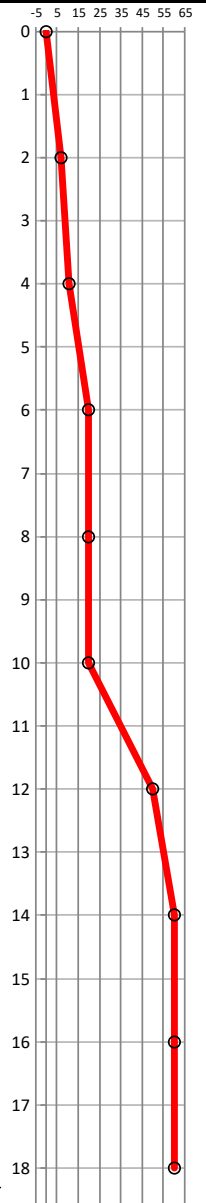
<p><b>Land Side</b></p>  <p>Climate : Sunny</p>	<p>Bor Hole No. : BH-2</p> <p>Date from : 22-02-2022 to : 24-02-2022</p> <p>Total Depth : 18 m</p> <p>Inclination : 90°</p> <p>Casing Diameter : HQ, NQ</p> <p>Dropping Disc. : 75 cm</p>	<p>Legend :</p> <table style="width: 100%;"> <tr> <td></td> <td>Clay</td> <td></td> <td>Gravel</td> <td></td> <td>X SPT</td> </tr> <tr> <td></td> <td>Silt</td> <td></td> <td>Boulder</td> <td></td> <td>Undisturbed Sample</td> </tr> <tr> <td></td> <td>Sand</td> <td></td> <td>Bedrock</td> <td></td> <td>Disturbed Sample</td> </tr> <tr> <td></td> <td>Peat</td> <td></td> <td>Water Table</td> <td></td> <td></td> </tr> </table>		Clay		Gravel		X SPT		Silt		Boulder		Undisturbed Sample		Sand		Bedrock		Disturbed Sample		Peat		Water Table			<p>Soil Penetration Test</p>
	Clay		Gravel		X SPT																						
	Silt		Boulder		Undisturbed Sample																						
	Sand		Bedrock		Disturbed Sample																						
	Peat		Water Table																								

Elev. (m)	Depth (m)	Type Of Test	Sample Depth (m)	No. of Blows / Penetration (cm)			N <sub>SPT</sub>	LOG	SOIL DESCRIPTION	GRAPHIC SPT	
				1st	2nd	3rd					
220.00	0.00						0			0	
219.50	-0.50									1	
219.00	-1.00									2	
218.50	-1.50									3	
218.00	-2.00	SPT	2.00 - 2.45	3	15	3	15	4	15	7	30
217.50	-2.50									4	
217.00	-3.00	UDS	3.00 - 3.50							5	
216.50	-3.50									6	
216.00	-4.00	SPT	4.00 - 4.45	4	15	6	15	5	15	11	30
215.50	-4.50									12	
215.00	-5.00	UDS	5.00 - 5.50							13	
214.50	-5.50									14	
214.00	-6.00	SPT	6.00 - 6.45	8	15	10	15	10	15	20	30
213.50	-6.50									21	
213.00	-7.00									22	
212.50	-7.50									23	
212.00	-8.00	SPT	8.00 - 8.45	7	15	9	15	11	15	20	30
211.50	-8.50									21	
211.00	-9.00	UDS	9.00 - 9.50							22	
210.50	-9.50									23	
210.00	-10.00	SPT	10.00 - 10.45	6	15	10	15	10	15	20	30
209.50	-10.50									21	
209.00	-11.00									22	
208.50	-11.50									23	
208.00	-12.00	SPT	12.00 - 12.45	9	15	20	15	30	15	50	30
207.50	-12.50									24	
207.00	-13.00									25	
206.50	-13.50									26	
206.00	-14.00	SPT	14.00 - 14.45	16	15	27	15	33	15	60	30
205.50	-14.50									27	
205.00	-15.00									28	
204.50	-15.50									29	
204.00	-16.00	SPT	16.00 - 16.45	12	15	36	15	24	15	60	30
203.50	-16.50									30	
203.00	-17.00									31	
202.50	-17.50									32	
202.00	-18.00	SPT	18.00 - 18.45	9	15	21	15	39	14	60	29

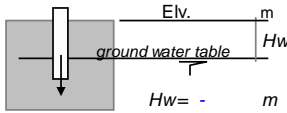
Soil lempung dengan warna coklat tua

Material didominasi pasir, lempung, kerikil dan kerakal berwarna coklat kehijauan

End Drilling 18 m



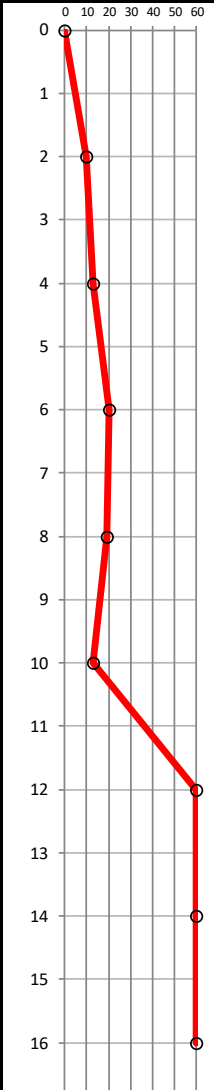
# JC03

<p><b>Land Side</b></p>  <p>Climate : Sunny</p>	<p>Bor Hole No. : BH-3</p> <p>Date from : 09-02-2022 to : 14-02-2022</p> <p>Total Depth : 16 m</p> <p>Inclination : 90°</p> <p>Casing Diameter : HQ, NQ</p> <p>Dropping Disc. : 75 cm</p>	<p>Legend :</p> <table style="width: 100%;"> <tr> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul> </td> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul> </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> <li> SPT</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<ul style="list-style-type: none"> <li> SPT</li> </ul>	<p>Soil Penetration Test</p>
<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<ul style="list-style-type: none"> <li> SPT</li> </ul>				

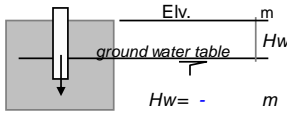
Elev. (m)	Depth (m)	Type Of Test	Sample Depth (m)	No. of Blows / Penetration (cm)			N <sub>SPT</sub>	LOG	SOIL DESCRIPTION	GRAPHIC SPT	
				1st	2nd	3rd					
132.00	0.00						0			0	
131.50	-0.50									1	
131.00	-1.00									2	
130.50	-1.50									3	
130.00	-2.00	SPT	2.00 - 2.45	3	15	4	15	6	15	10	30
129.50	-2.50									4	
129.00	-3.00	UDS	3.00 - 3.50							5	
128.50	-3.50									6	
128.00	-4.00	SPT	4.00 - 4.45	6	15	6	15	7	15	13	30
127.50	-4.50									4	
127.00	-5.00									5	
126.50	-5.50									6	
126.00	-6.00	SPT	6.00 - 6.45	10	15	10	15	10	15	20	30
125.50	-6.50									7	
125.00	-7.00									8	
124.50	-7.50									9	
124.00	-8.00	SPT	8.00 - 8.45	9	15	9	15	10	15	19	30
123.50	-8.50									10	
123.00	-9.00									11	
122.50	-9.50									12	
122.00	-10.00	SPT	10.00 - 10.45	3	15	6	15	7	15	13	30
121.50	-10.50									10	
121.00	-11.00									11	
120.50	-11.50									12	
120.00	-12.00	SPT	12.00 - 12.45	20	15	60	8			60	8
119.50	-12.50									13	
119.00	-13.00									14	
118.50	-13.50									15	
118.00	-14.00	SPT	14.00 - 14.45	34	15	60	6			60	6
117.50	-14.50									16	
117.00	-15.00									17	
116.50	-15.50									18	
116.00	-16.00	SPT	16.00 - 16.45	22	15	60	12		End Drilling	60	12

Soil lempung dengan warna coklat tua

Material didominasi pasir, lempung, kerikil dan kerakal berwarna coklat kehijauan



# JC04

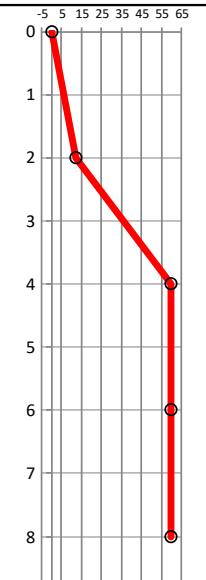
<p><b>Land Side</b></p>  <p>Climate : Sunny</p>	<p>Bor Hole No. : BH-4</p> <p>Date from : 15-02-2022 to : 17-02-2022</p> <p>Total Depth : 14 m</p> <p>Inclination : 90°</p> <p>Casing Diameter : HQ, NQ</p> <p>Dropping Disc. : 75 cm</p>	<p>Legend :</p> <table style="width: 100%;"> <tr> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul> </td> <td style="width: 33%;"> <ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul> </td> <td style="width: 33%; vertical-align: top;"> <p>Soil Penetration Test</p> <p style="text-align: right;">✕ SPT</p> </td> </tr> </table>	<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<p>Soil Penetration Test</p> <p style="text-align: right;">✕ SPT</p>
<ul style="list-style-type: none"> <li> Clay</li> <li> Silt</li> <li> Sand</li> <li> Peat</li> <li> Water Table</li> </ul>	<ul style="list-style-type: none"> <li> Gravel</li> <li> Boulder</li> <li> Bedrock</li> <li> Undisturbed Sample</li> <li> Disturbed Sample</li> </ul>	<p>Soil Penetration Test</p> <p style="text-align: right;">✕ SPT</p>			

Elev. (m)	Depth (m)	Type Of Test	Sample Depth (m)	No. of Blows / Penetration (cm)			N <sub>SPT</sub>	LOG	SOIL DESCRIPTION	GRAPHIC SPT					
				1st	2nd	3rd									
180.00	0.00						0			0					
179.50	-0.50									1					
179.00	-1.00									2					
178.50	-1.50									3					
178.00	-2.00	SPT	2.00 - 2.45	5	15	5	15	6	15	11	30	✕			
177.50	-2.50														
177.00	-3.00	UDS	3.00 - 3.50												
176.50	-3.50														
176.00	-4.00	SPT	4.00 - 4.45	5	15	7	15	6	15	13	30	✕		Soil lempung dengan warna coklat tua	
175.50	-4.50														
175.00	-5.00	UDS	5.00 - 5.50												
174.50	-5.50														
174.00	-6.00	SPT	6.00 - 6.45	3	15	6	15	10	15	16	30	✕			
173.50	-6.50														
173.00	-7.00														
172.50	-7.50														
172.00	-8.00	SPT	8.00 - 8.45	6	15	6	15	7	15	13	30	✕			8 m
171.50	-8.50														
171.00	-9.00	UDS	9.00 - 9.50												
170.50	-9.50														
170.00	-10.00	SPT	10.00 - 10.45	13	15	60	12			60	30	✕		Material didominasi pasir, lempung, kerikil dan kerakal berwarna coklat kehijauan	
169.50	-10.50														
169.00	-11.00														
168.50	-11.50														
168.00	-12.00	SPT	12.00 - 12.45	38	15	60	9			60	9	✕			
167.50	-12.50														
167.00	-13.00														
166.50	-13.50														
166.00	-14.00	SPT	14.00 - 14.45	42	15	60	6			60	6	✕		End Drilling	14 m

# JC05

<p><b>Land Side</b></p> <p>Climate : Sunny</p>	<p>Bor Hole No. : BH-5</p> <p>Date from : 18-02-2022 to : 19-02-2022</p> <p>Total Depth : 8 m</p> <p>Inclination : 90°</p> <p>Casing Diameter : HQ, NQ</p> <p>Dropping Disc. : 75 cm</p>	<p>Legend :</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> Clay</td> <td style="width: 33%;"> Gravel</td> <td style="width: 33%;"> SPT</td> </tr> <tr> <td> Silt</td> <td> Boulder</td> <td></td> </tr> <tr> <td> Sand</td> <td> Bedrock</td> <td></td> </tr> <tr> <td> Peat</td> <td> Undisturbed Sample</td> <td></td> </tr> <tr> <td> Water Table</td> <td> Disturbed Sample</td> <td></td> </tr> </table>	Clay	Gravel	SPT	Silt	Boulder		Sand	Bedrock		Peat	Undisturbed Sample		Water Table	Disturbed Sample		<p>Soil Penetration Test</p>
Clay	Gravel	SPT																
Silt	Boulder																	
Sand	Bedrock																	
Peat	Undisturbed Sample																	
Water Table	Disturbed Sample																	

Elev. (m)	Depth (m)	Type Of Test	Sample Depth (m)	No. of Blows / Penetration (cm)			N <sub>SPT</sub>	LOG	SOIL DESCRIPTION	GRAPHIC SPT				
				1st	2nd	3rd								
141.00	0.00						0							
140.50	-0.50													
140.00	-1.00													
139.50	-1.50													
139.00	-2.00	SPT	2.00 - 2.45	4	15	7	15	5	15	12	30	X		
138.50	-2.50													
138.00	-3.00	UDS	3.00 - 3.50											
137.50	-3.50													
137.00	-4.00	SPT	4.00 - 4.45	33	15	60	3			60	3	X		
136.50	-4.50													
136.00	-5.00													
135.50	-5.50													
135.00	-6.00	SPT	6.00 - 6.45	60	5					60	5	X		
134.50	-6.50													
134.00	-7.00													
133.50	-7.50													
133.00	-8.00	SPT	8.00 - 8.45	60	5					60	5	X		





**LABORATORY+A1:O30 TEST RESUME**

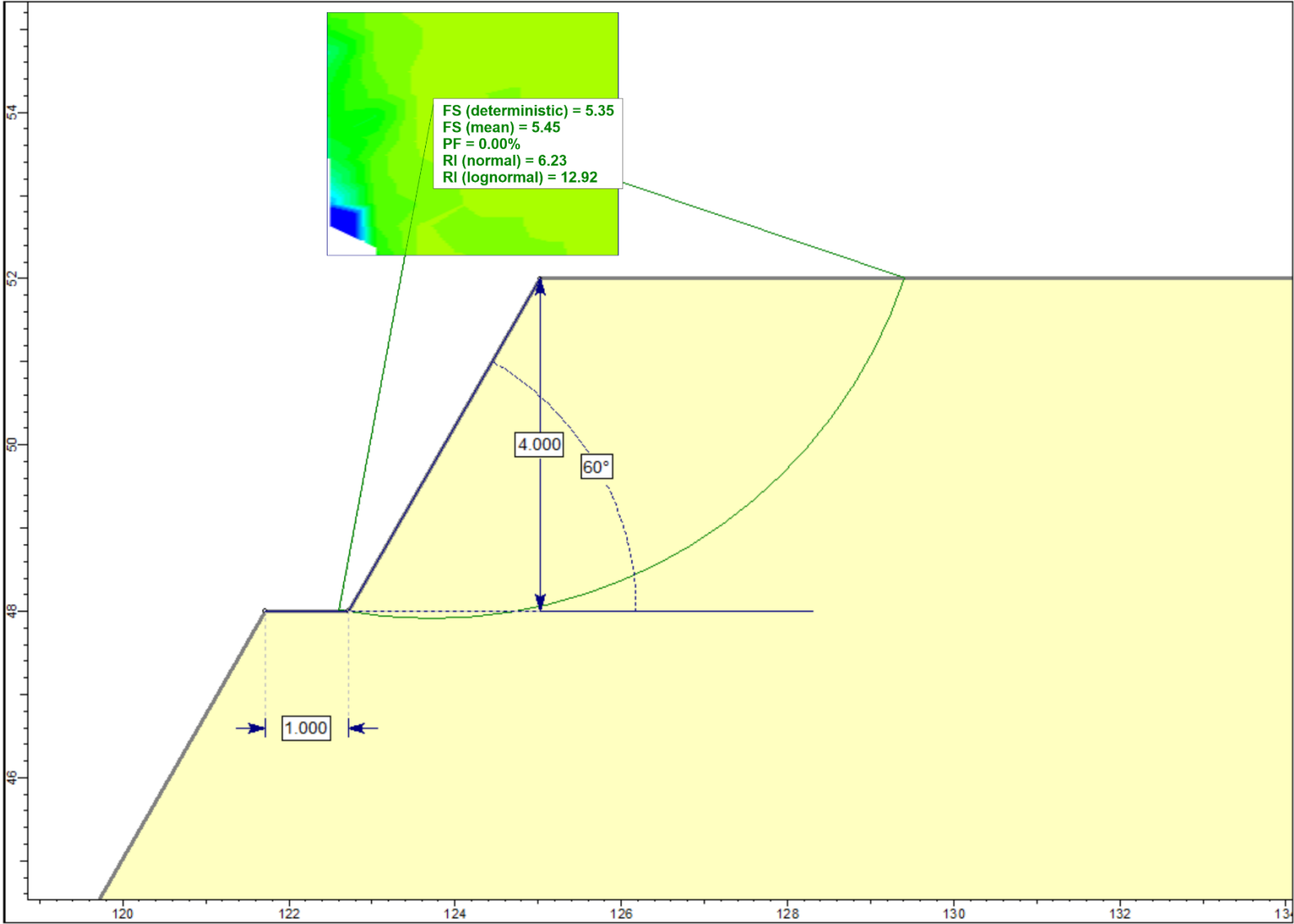


No.Lab : MIN.076/2022  
 Material : Soil  
 Bor location : Desa Koninis

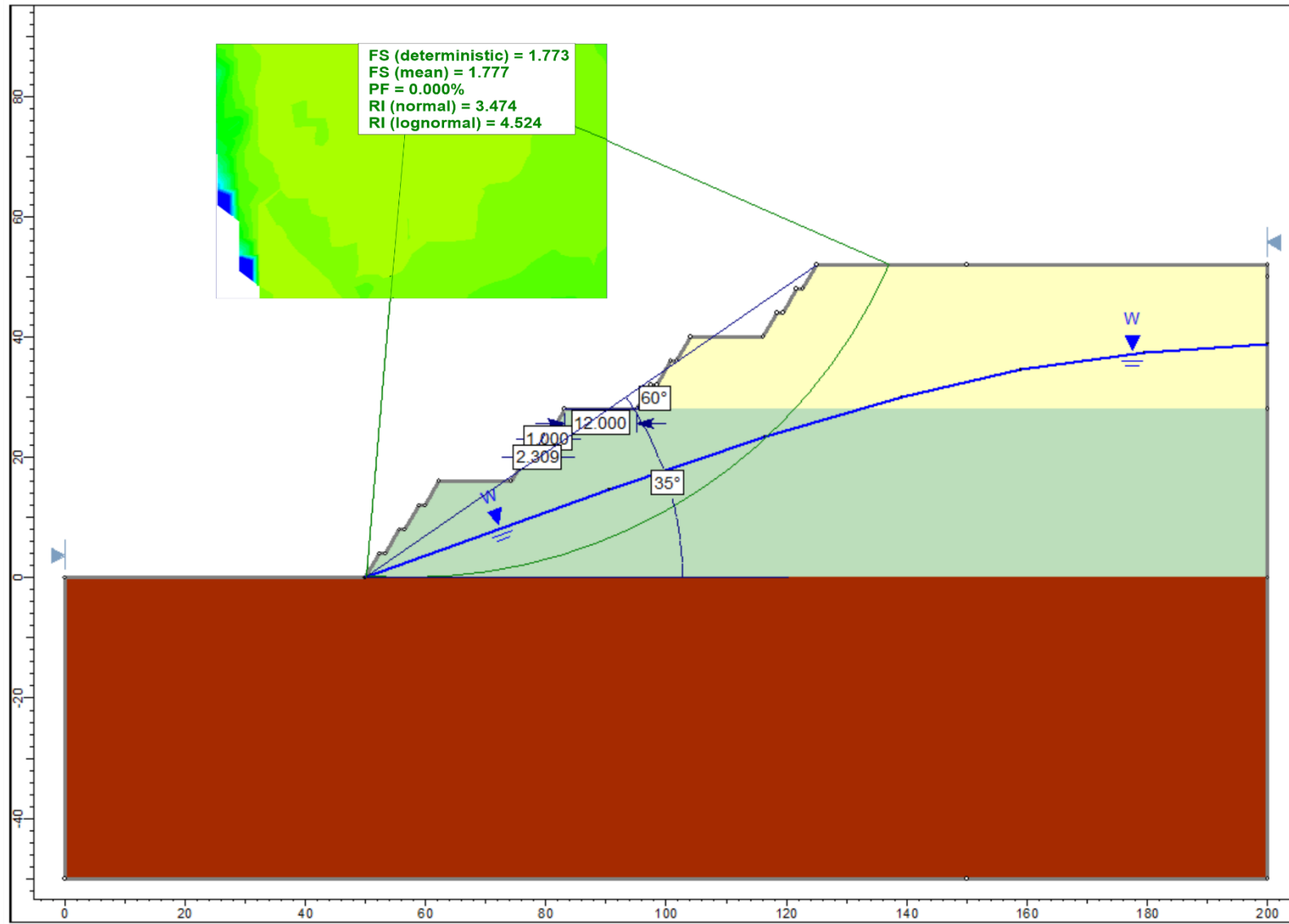
Check by : Muh.Ali  
 Date : 8 Maret 2022  
 No. Bor :

Bore Hole No.			JC02 UDS 3 9 M	JC01 UDS 2 5 M	JC01 UDS 3 9 M	JC01 UDS 2 3 M	JC05 UDS 1 3 M	JC04 UDS 3 9 M	JC04 UDS 2 5 M	JC04 UDS 1 3 M	JC02 UDS 1 3 M	JC02 UDS 2 5 M	JC03 UDS 1 3 M	
Sample No.														
Sample Depth.														
Specific Gravity (Gs)			-	1,895	1,462	2,426	2,511	2,065	1,823	1,958	2,208	2,453	2,373	2,507
Natural Slate	(Soil Index)	Water Content (W)	%	66,43	36,10	59,32	42,40	40,95	71,36	49,14	66,09	47,61	55,95	38,24
		Wet Density	gram/cm <sup>3</sup>	1,39	2,48	2,04	2,13	1,98	1,39	1,86	1,94	2,15	1,66	2,53
		Dry Density	gram/cm <sup>3</sup>	0,60	1,83	1,26	1,50	1,28	0,54	1,20	1,13	1,31	1,03	1,90
		Void Ratio	-	2,18	0,20	0,94	0,67	0,62	2,40	0,63	0,95	0,88	1,31	0,32
		Porosity	%	68,45	25,07	47,86	40,11	37,98	70,44	38,51	48,64	46,78	56,67	24,36
		Degree of Saturation	%	86,21	38,21	62,62	64,24	53,95	82,61	58,73	60,25	55,33	90,16	38,35
Atterberg	Limits	Liquid Limit (LL)	%	84,99	Non Plastis	Non Plastis	Non Plastis	Non Plastis	63,05	64,14	45,93	Non Plastis	58,02	32,68
		Plastic Limit (PL)	%	71,10					18,16	51,92	30,00		47,22	29,27
		Plasticity Index (PI)	%	13,88					44,89	12,21	15,93		10,79	3,41
Grand Size	Gravel	%	1,49	1,99	8,56	0,19	0,35	0,04	0,20	14,17	0,06	1,15	3,54	
	Sand	%	59,90	29,87	80,22	83,69	24,44	13,97	43,08	70,46	80,54	31,84	75,75	
	Silt	%	4,31	3,09	7,61	7,83	2,47	1,93	7,00	11,27	12,50	8,36	13,94	
	Clay	%	34,30	65,06	3,61	8,29	72,74	84,06	49,72	4,10	6,91	58,65	6,77	
Direct Shear	j	°	34,06	41,01	28,70	42,77	47,88	58,36	53,40	57,77	48,05	56,76	49,91	
	c	kg/cm <sup>2</sup>	0,19	0,10	0,43	0,58	0,46	0,31	0,28	0,21	0,16	0,52	0,51	
Uncunfined Compression Test	q <sub>u</sub>	kg/cm <sup>2</sup>	0,726	0,528	0,528	0,330	0,592	0,526	0,393	0,592	0,264	0,526	0,524	
		Kpa	71,209	51,788	51,788	32,368	58,052	51,602	38,562	58,052	25,894	51,602	51,416	
	E axial	kg/cm <sup>2</sup>	10,180,310	7,403,862	7,403,862	4,627,414	5,532,950	4,918,178	2,756,502	5,532,950	3,701,931	4,918,178	3,675,336	
		GPa	0,998	0,726	0,726	0,454	0,543	0,482	0,270	0,543	0,363	0,482	0,360	
	e = dh/h	%	0,713	0,713	0,713	0,713	1,070	1,070	1,427	1,070	0,713	1,070	1,427	
Consolidation Test	C <sub>c</sub>	-	0,016	0,017	0,013	0,017	0,016	0,013	0,017	0,016	0,013	0,017	0,048	
	C <sub>v</sub>	cm <sup>2</sup> /detik	0,00802	0,00842	0,00833	0,00840	0,00820	0,00811	0,00819	0,00810	0,00802	0,00872	0,00789	

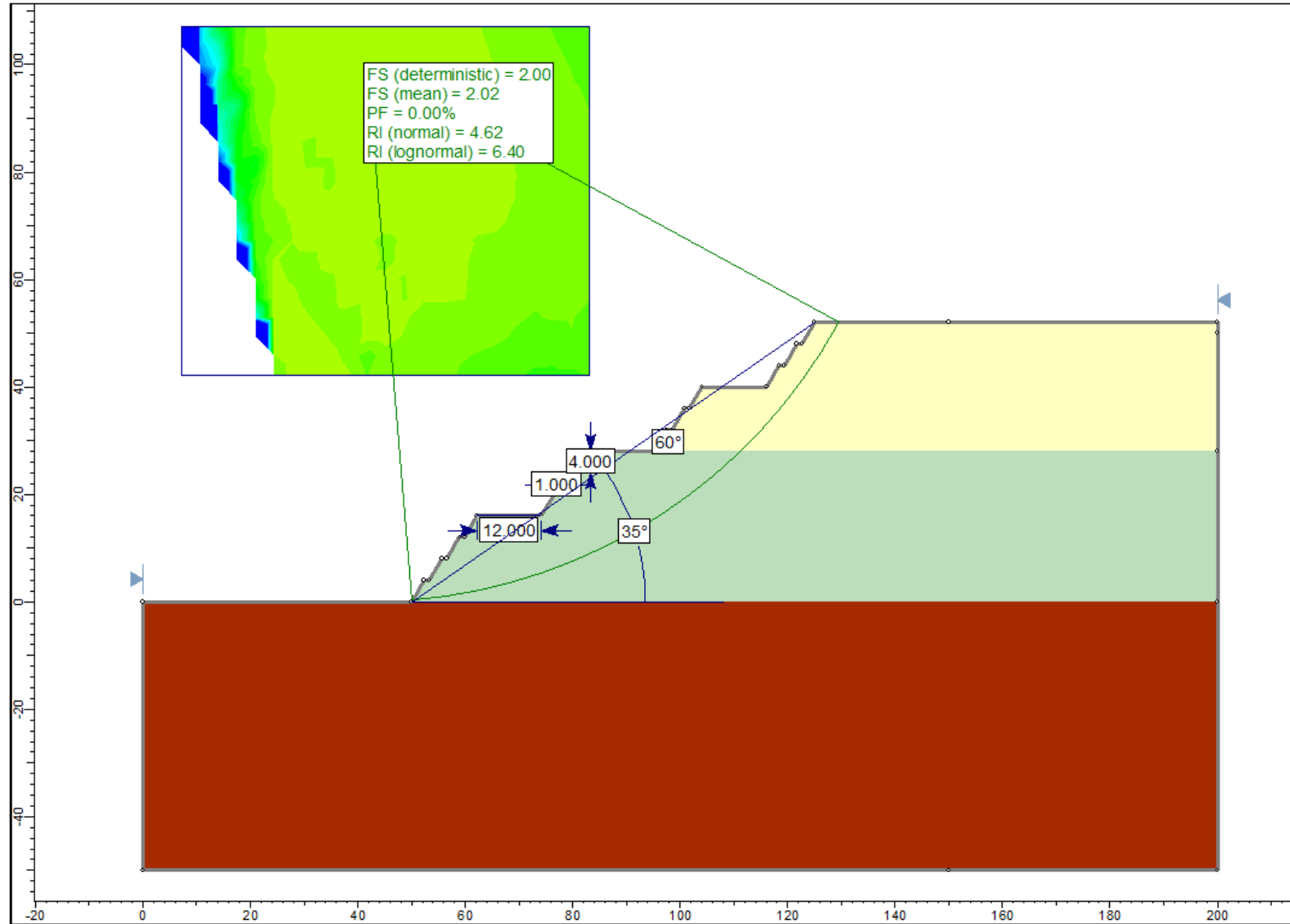
### Lereng Tunggal Limonit Statis



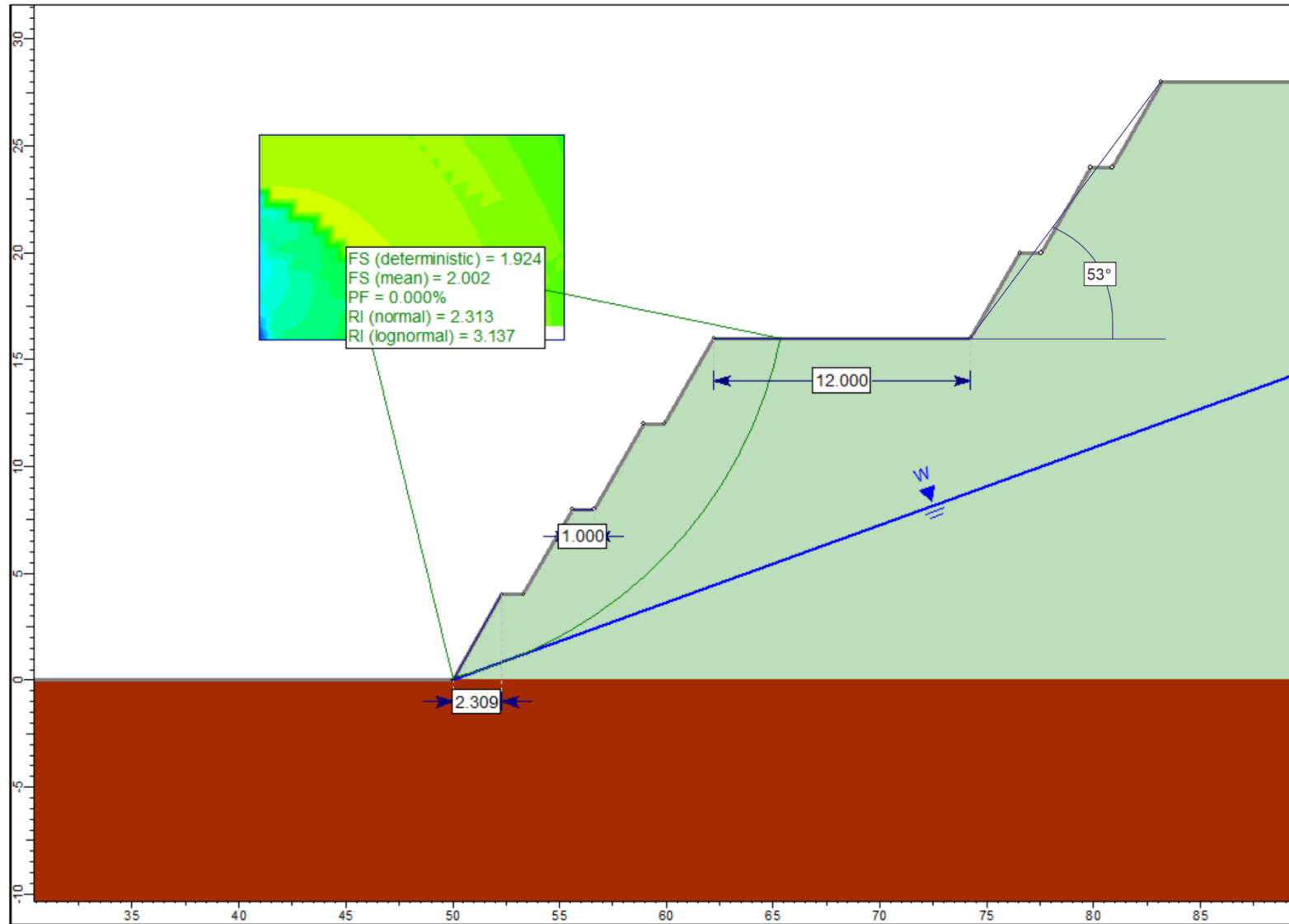
## Desain Lereng Keseluruhan Pengaruh MAT Statis



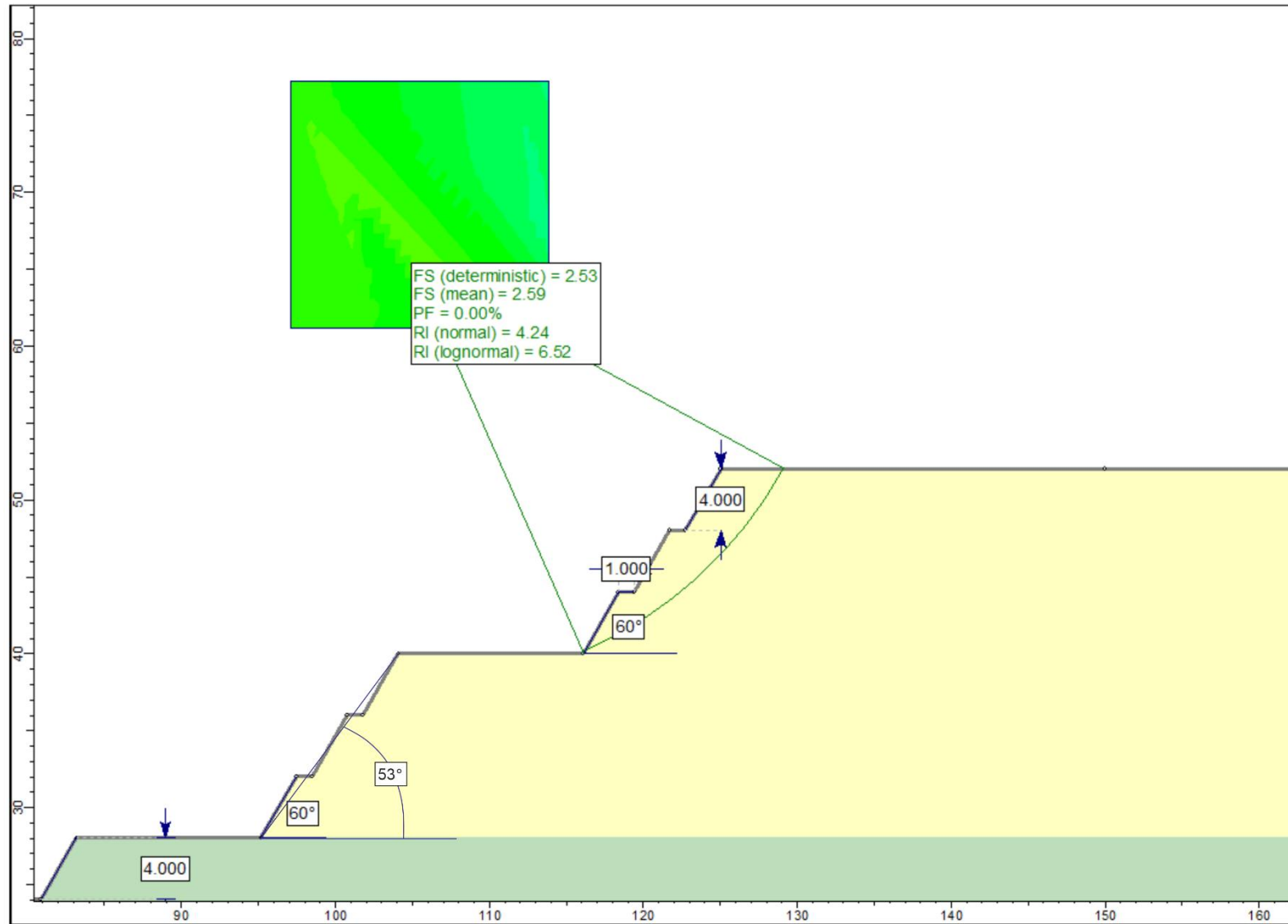
# Desain Lereng Keseluruhan Statis



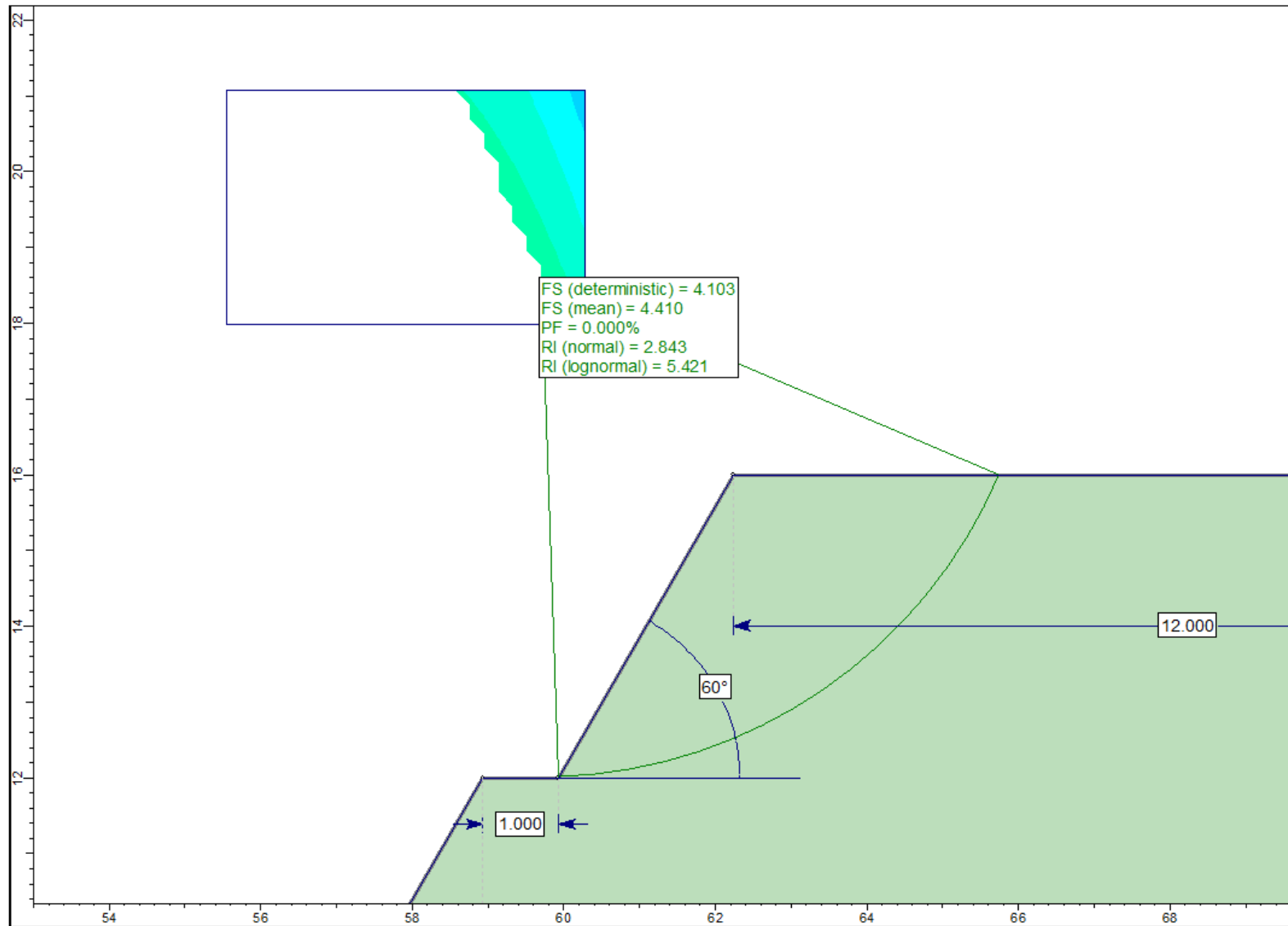
### Desain Lereng Inter-Ramp Saprolit Statis



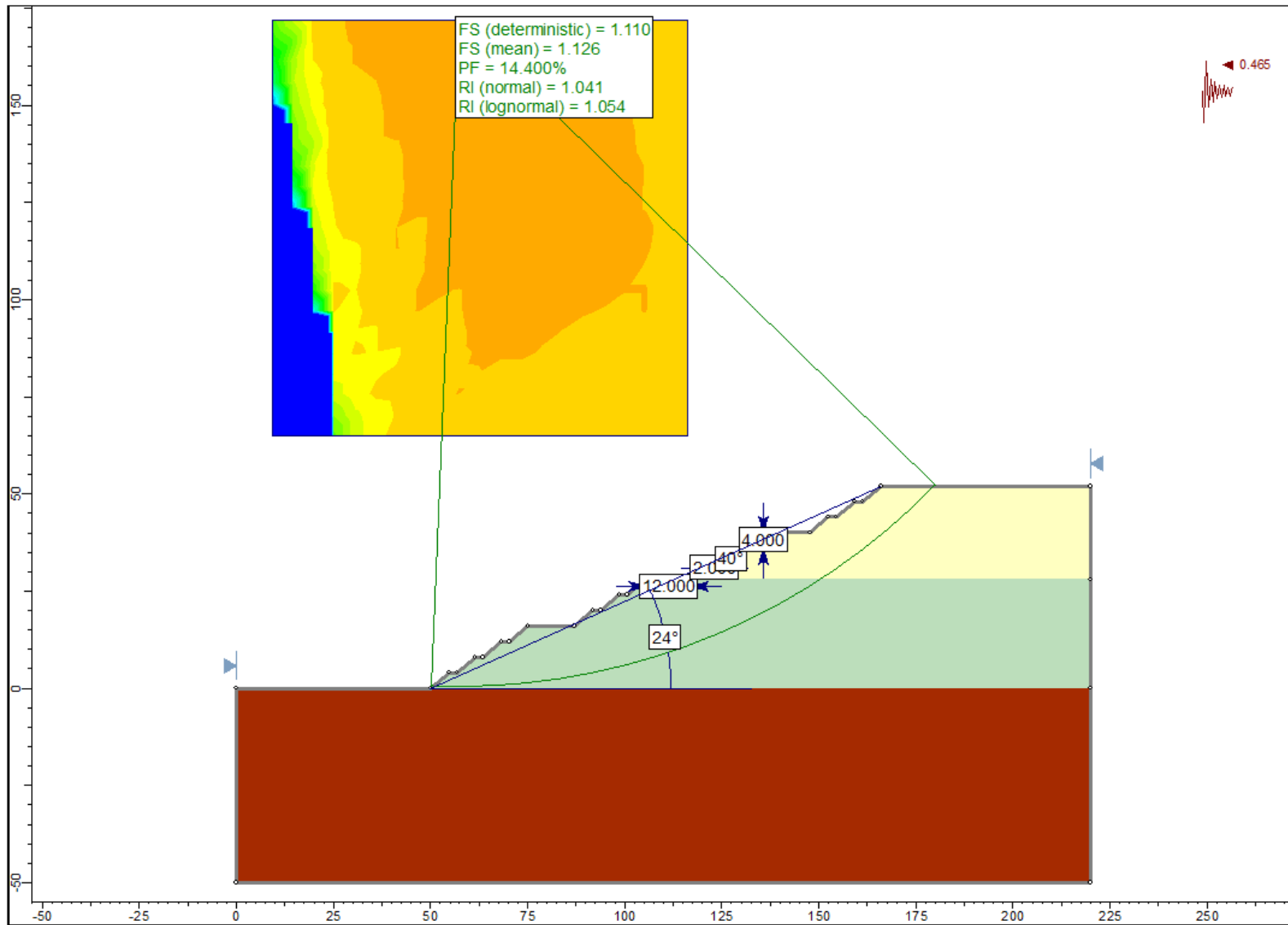
## Desain Lereng Inter-Ramp Limonit Statis



## Desain Lereng Tunggal Saprolit Statis

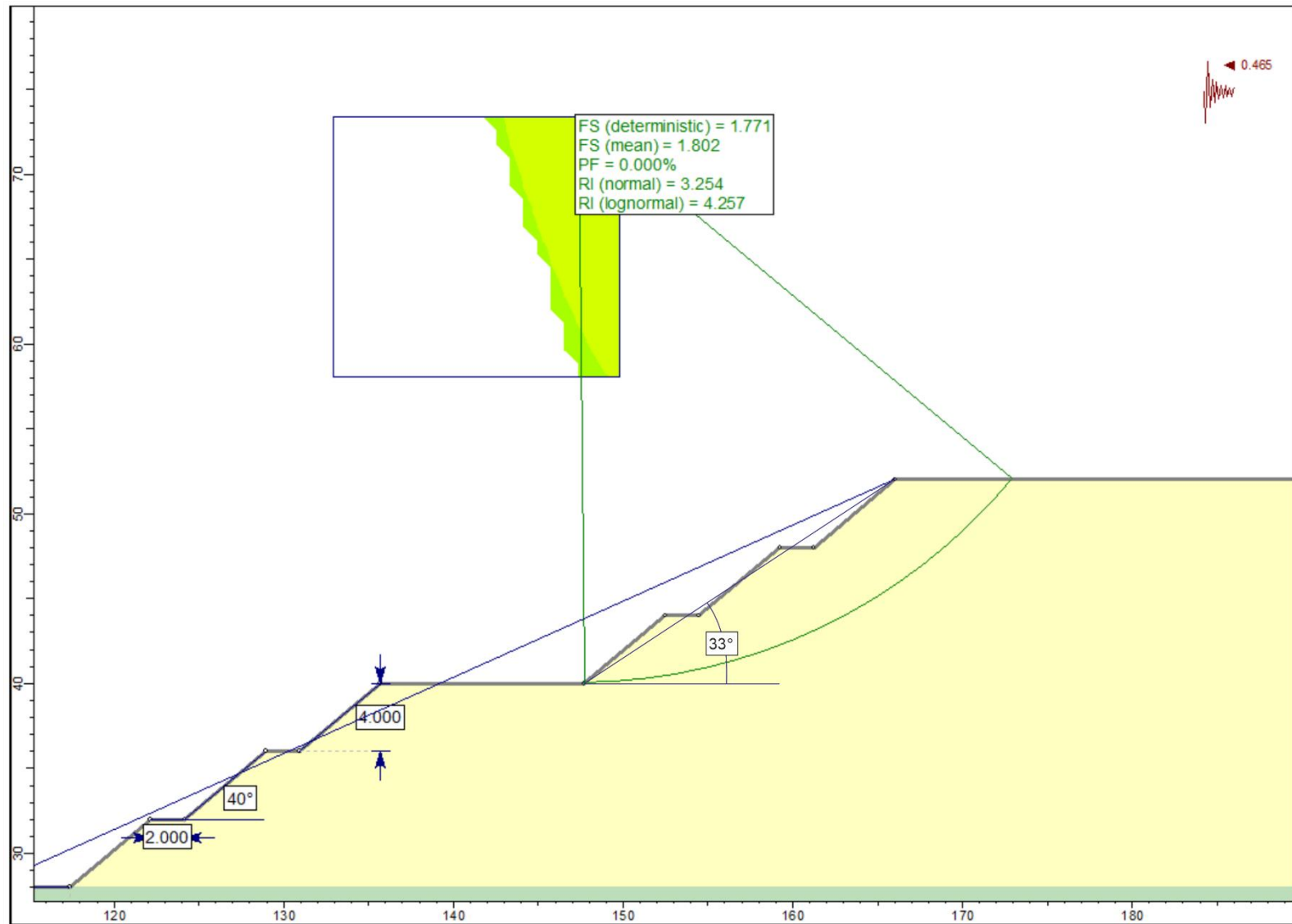


## Desain Lereng Keseluruhan Dinamis

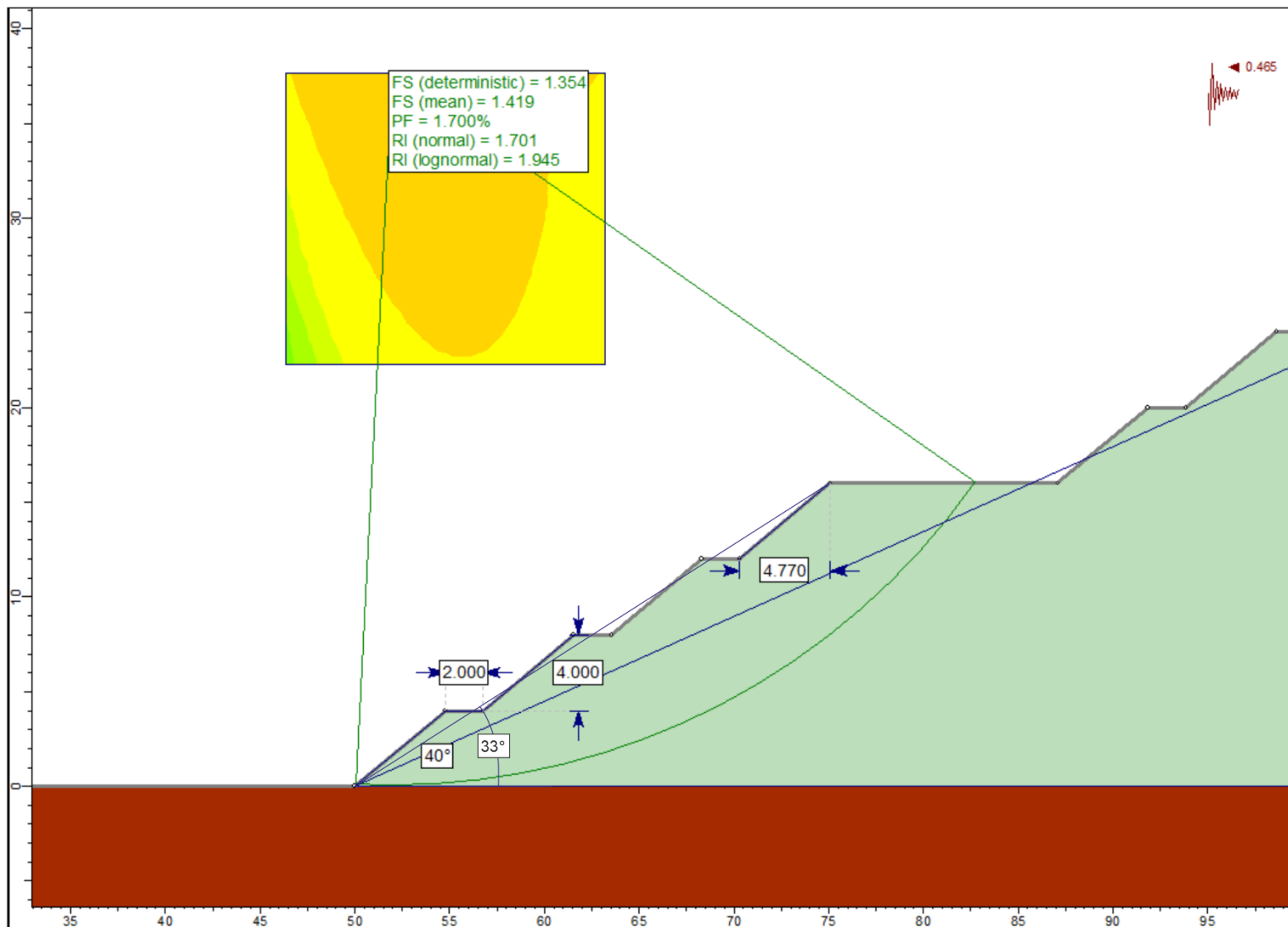




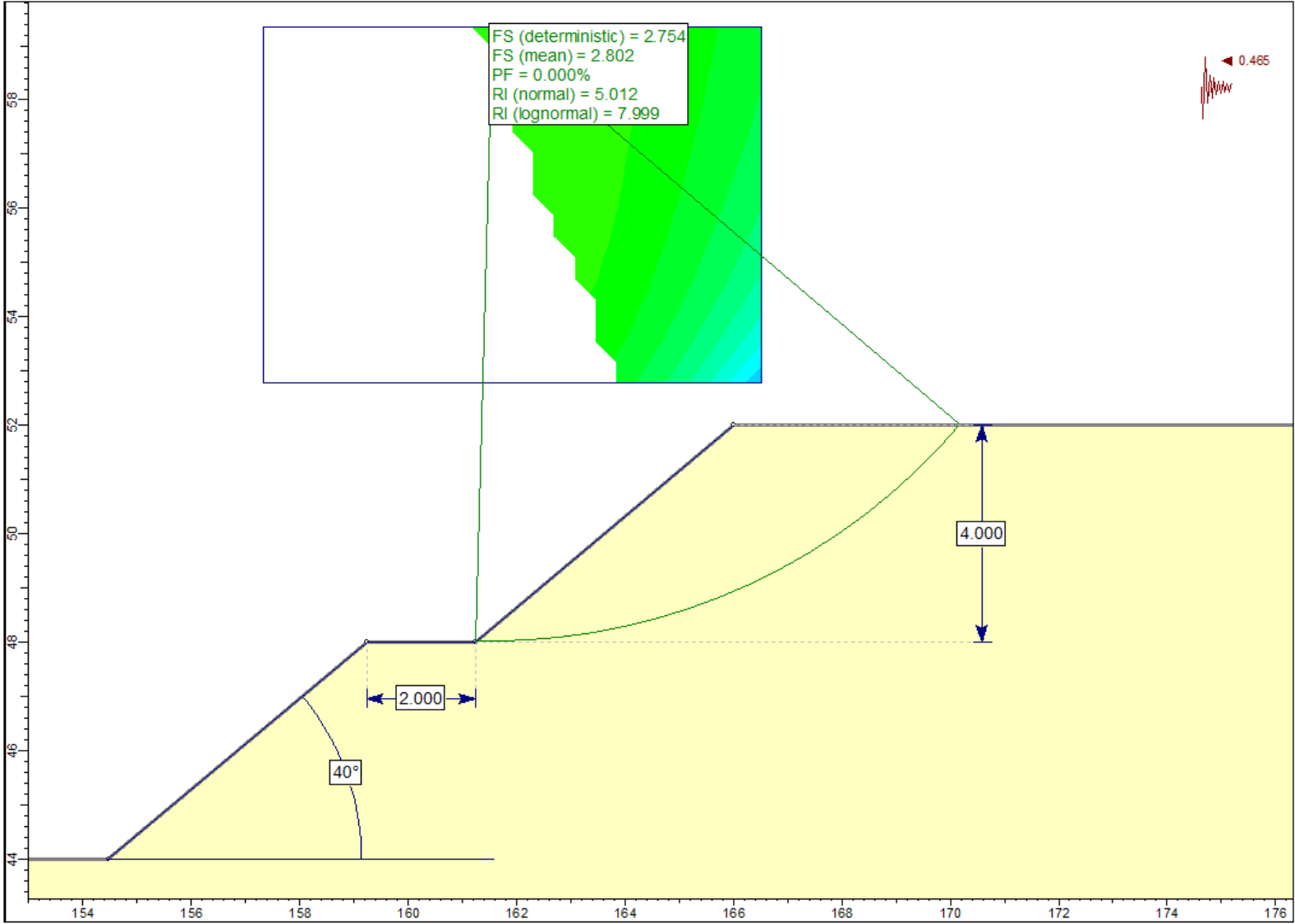
## Desain Lereng Inter-Ramp Limonit Dinamis



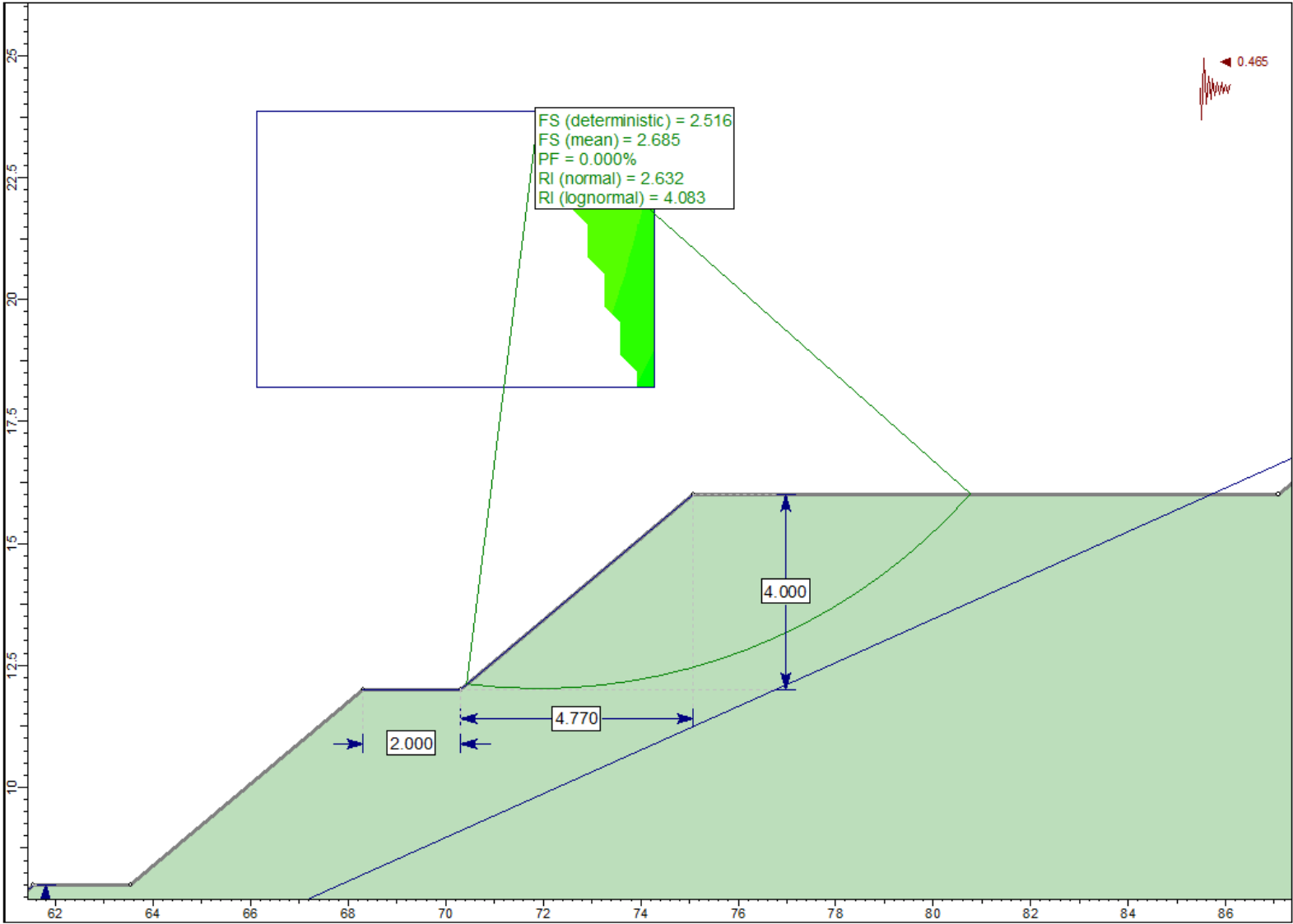
### Desain Lereng Inter-Ramp Saprolit Dinamis



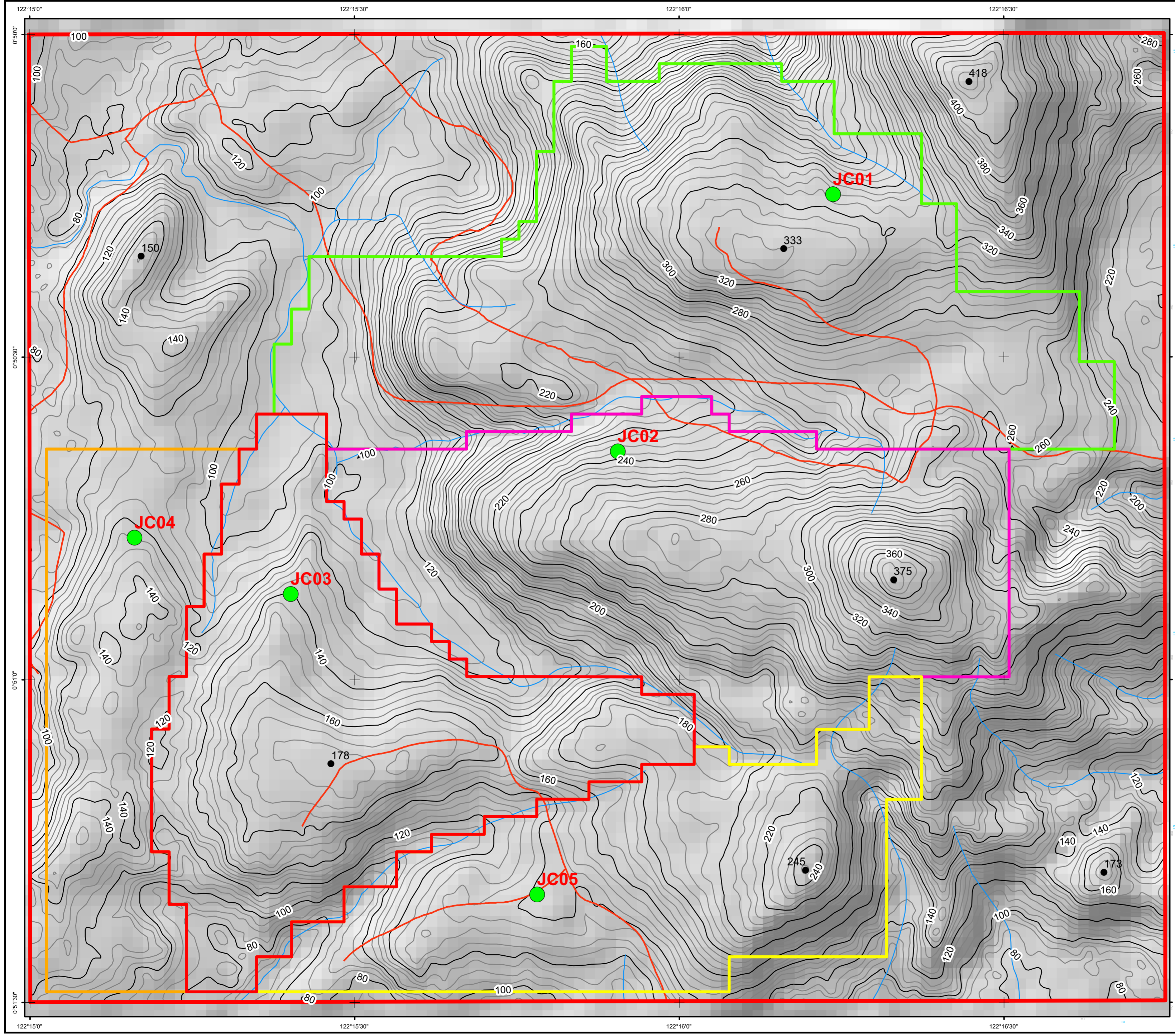
# Desain Lereng Tunggal Limonit Dinamis



# Desain Lereng Tunggal Saprolit Dinamis



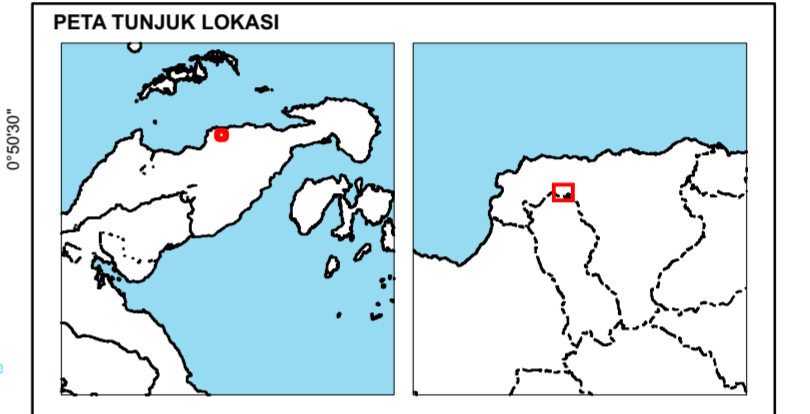
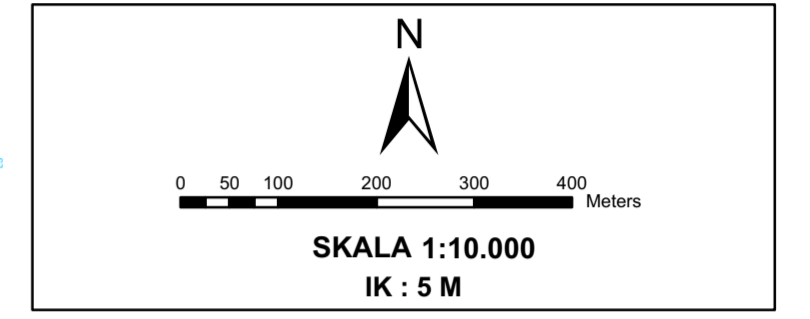




KEMENTERIAN PENDIDIKAN KEBUDAYAAN RISET DAN TEKNOLOGI  
 UNIVERSITAS HASANUDDIN  
 FAKULTAS TEKNIK  
 DEPARTEMEN TEKNIK GEOLOGI

**PETA STASIUN**

DAERAH KONINIS KECAMATAN BUNTA  
 KABUPATEN BANGGAI

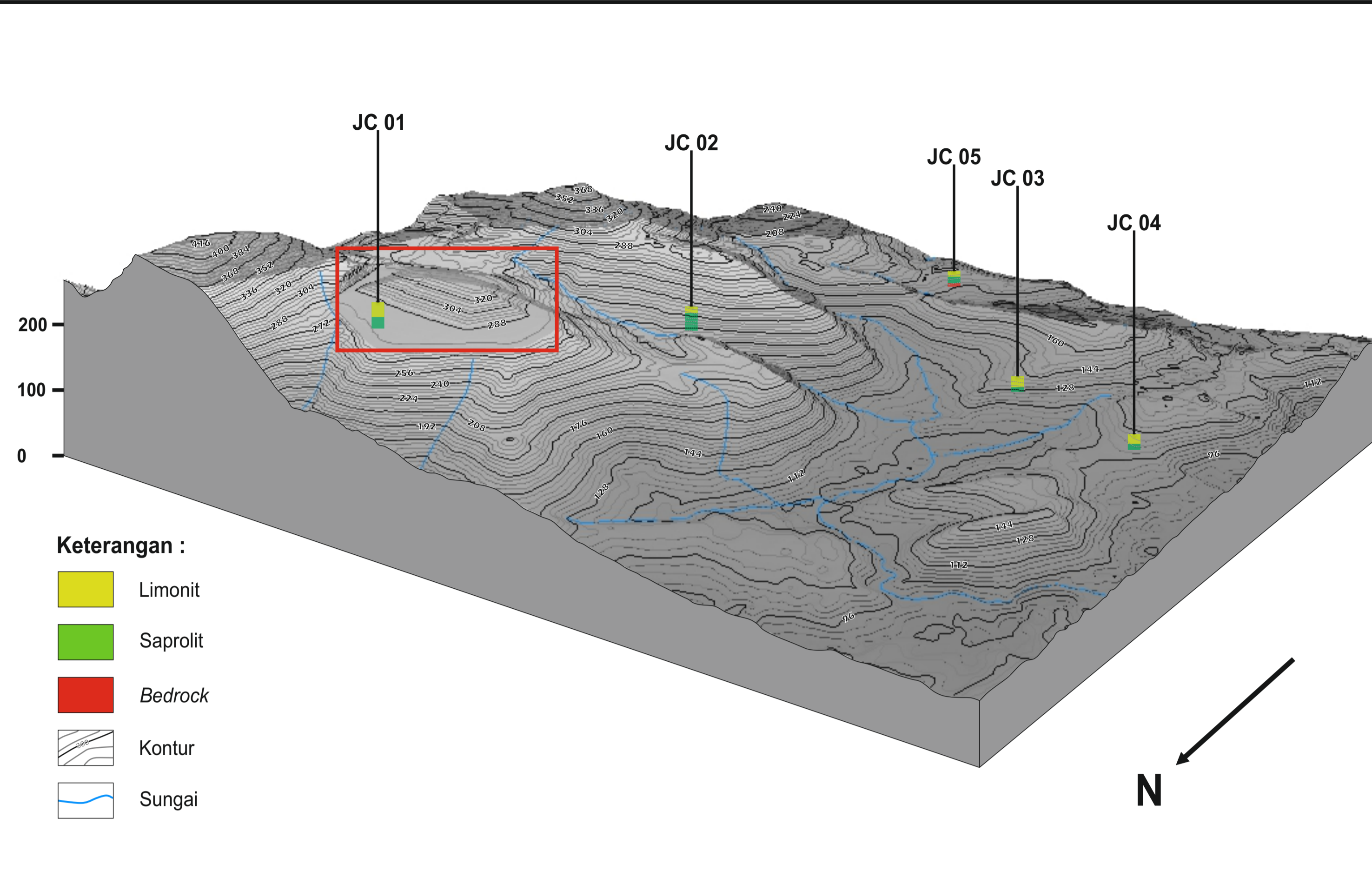


- KETERANGAN:**
- Stasiun
  - Batas Penelitian
  - Batas PIT**
  - Area 1
  - Area 2
  - Area 3
  - Area 4
  - Area 5
  - Titik Ketinggian
  - Kontur Indeks
  - Garis Kontur
  - Sungai
  - Jalan

Proyeksi : ..... Transverse Mercator  
 Sistem Grid : ..... Grid Geografi dan Grid Universal Transverse Mercator  
 Datum Horizontal : ..... WGS 1984 Zona 50 S



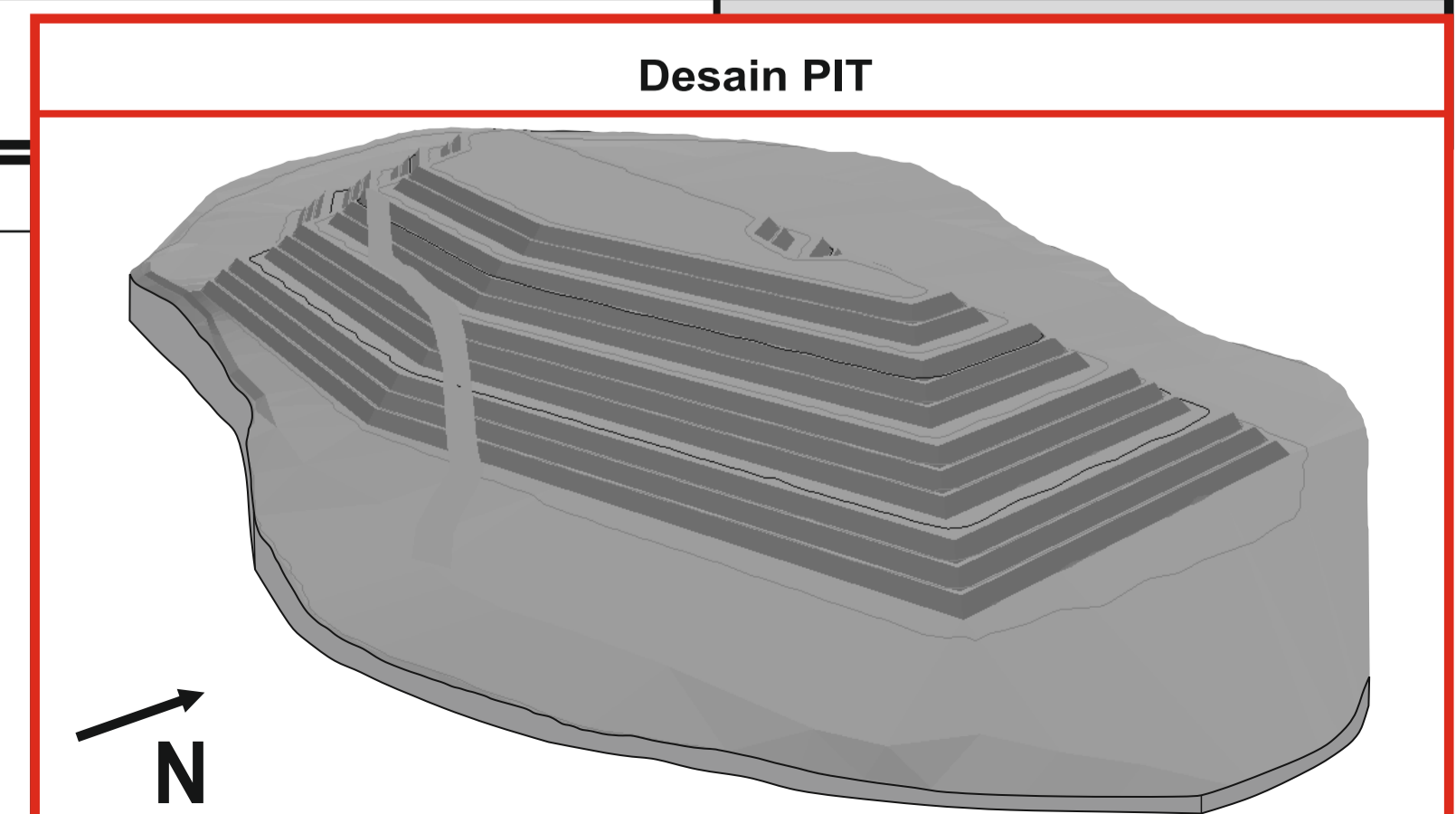
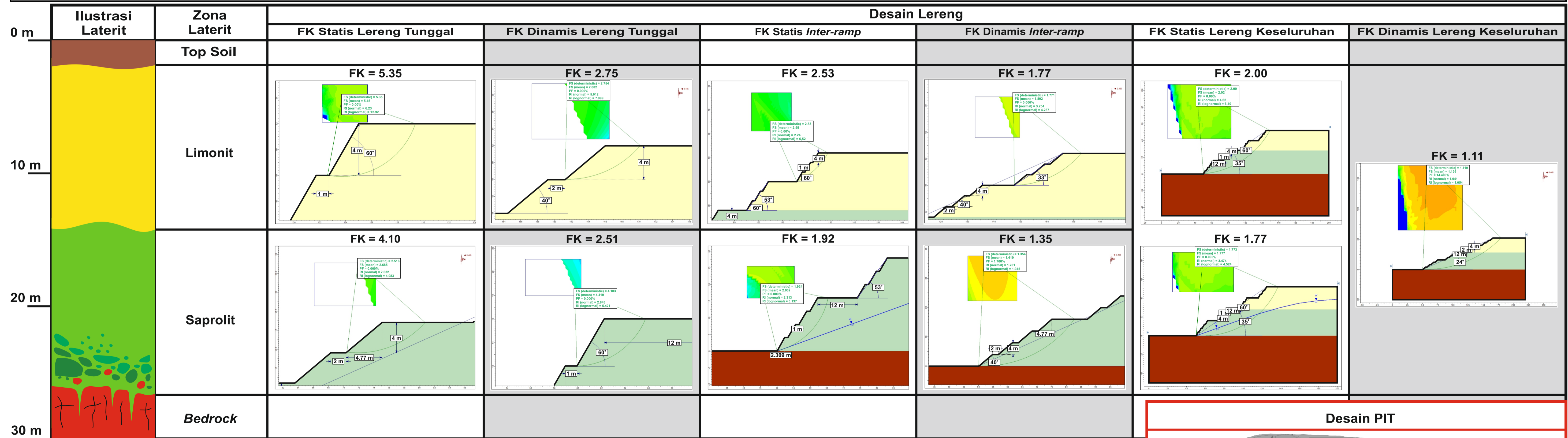
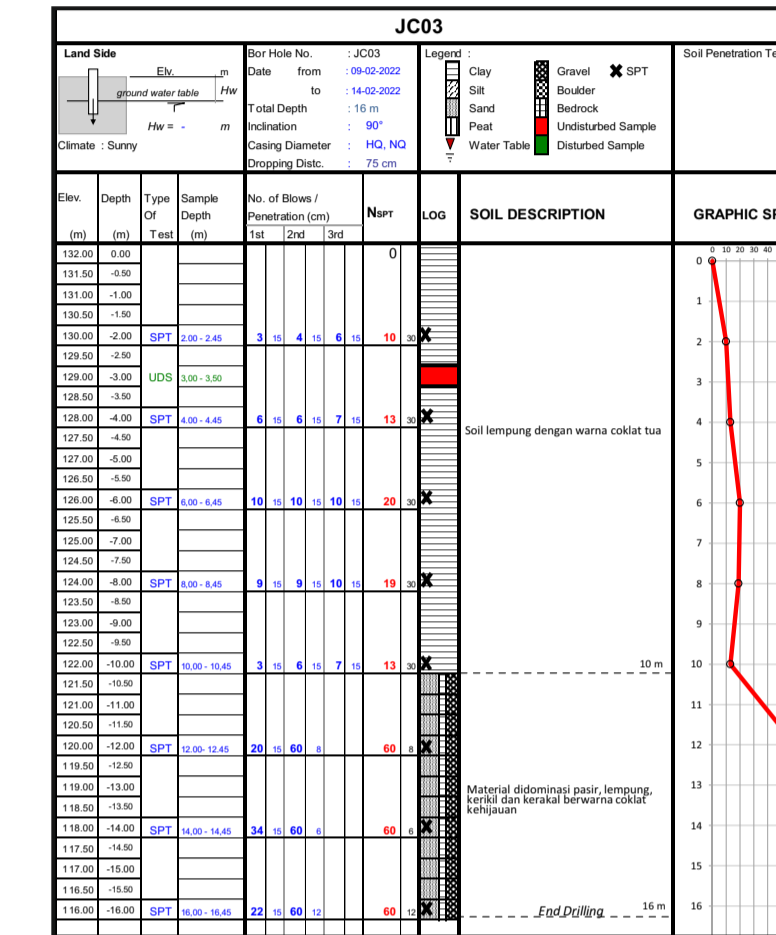
# DESAIN LERENG TAMBANG PIT X DAERAH KONINIS KECAMATAN BUNTA KABUPATEN BANGGAI PROVINSI SULAWESI TENGAH



- Keterangan :**
- Limonit
  - Saprolit
  - Bedrock
  - Kontur
  - Sungai

Lithology	Depth (m)	Description	Titik Bor					Mean
			JC01	JC02	JC03	JC04	JC05	
Upper Limonit	3	Wet Density (kN/m <sup>3</sup> )	20.89	21.08	24.81	19.02	19.42	21.04
		Dry Density (kN/m <sup>3</sup> )	14.71	12.85	18.63	11.08	12.55	13.96
		Bulk Density (kN/m <sup>3</sup> )	20.95	18.97	25.75	18.40	17.69	20.35
		Void Ratio, e	0.42	0.64	0.33	0.72	0.55	0.53
		Porosity, n	0.30	0.32	0.29	0.40	0.29	0.32
Lower Limonit	5	Cohesion (kPa)	56.87	17.65	50.01	20.59	47.07	38.44
		φ (o)	42.77	48.05	49.91	57.77	47.88	49.28
		q <sub>v</sub> (kPa)	32.37	25.89	51.41	58.05	58.05	45.16
		Wet Density (kN/m <sup>3</sup> )	24.32	16.28	18.24	18.24	19.61	19.61
		Dry Density (kN/m <sup>3</sup> )	17.95	10.10	11.77	11.77	13.27	13.27
Saprolit	9	Bulk Density (kN/m <sup>3</sup> )	24.43	15.75	17.55	15.75	19.24	19.24
		Void Ratio, e	0.35	0.61	0.29	0.55	0.51	0.51
		Porosity, n	0.22	0.36	0.33	0.33	0.32	0.32
		Cohesion (kPa)	9.80	50.99	27.45	27.45	29.41	29.41
		φ (o)	41.01	56.76	53.40	53.40	50.39	50.39
		Wet Density (kN/m <sup>3</sup> )	20.01	13.63	13.63	13.63	15.76	15.76
		Dry Density (kN/m <sup>3</sup> )	12.36	5.88	5.30	5.30	7.85	7.85
		Bulk Density (kN/m <sup>3</sup> )	19.69	9.79	9.08	9.08	12.85	12.85
		Void Ratio, e	0.62	1.32	1.57	1.57	1.17	1.17
		Porosity, n	0.37	0.40	0.42	0.40	0.40	0.40
		Cohesion (kPa)	42.16	18.63	30.40	30.40	30.40	30.40
		φ (o)	28.70	34.06	58.36	58.36	40.37	40.37
		q <sub>v</sub> (kPa)	51.79	71.21	51.60	51.60	58.20	58.20

Data yang digunakan



Berdasarkan data bor dan hasil analisis laboratorium sampel UDS zona limonit, menghasilkan desain dengan FK lereng tunggal 5.35 dan FK Inter-ramp 2.53, nilai ini lebih besar dibandingkan nilai FK pada zonasi saprolit. Sedangkan pada zona saprolit menghasilkan desain dengan FK lereng tunggal 4.10 dan FK Inter-ramp 1.92. Pada Desain Lereng Keseluruhan terbagi menjadi dua yaitu FK Lereng Keseluruhan 2.00 dan FK Lereng Keseluruhan dengan pengaruh air tanah adalah 1.77. Nilai FK pada lereng keseluruhan lebih besar dibandingkan nilai FK lereng keseluruhan dengan pengaruh air tanah.

Berdasarkan data bor, hasil analisis laboratorium sampel UDS dan data kecepatan zona limonit, menghasilkan desain dengan FK lereng tunggal 2.75 dan FK Inter-ramp 1.77, nilai ini lebih besar dibandingkan nilai FK pada zonasi saprolit. Sedangkan pada zona saprolit menghasilkan desain dengan FK lereng tunggal 2.51 dan FK Inter-ramp 1.35. Pada Desain Lereng Keseluruhan menghasilkan nilai FK 1.11.