



SİSTEM ZEMİN MÜH. İNŞ
TİC.LTD.ŞTİ.

GEORGIA NAMAHHVANI
HPP CASCADE PROJECT

Start-Finish Date : 27.02-10.03.2018 :
Trend/Plunge Vertical
Coordinate.X : 315201
Coordinate.Y : 4703765
Core Diameter : 89,00 mm.
Elevation.Z (m) : 286,03 m.
D.Rig. Rotary : Hydraulic / Rotary
Boring Depth : 42.00 m.
Casing Depth : 42.00 m.
Groundwater : 11.00 m.

BOREHOLE NO: BH-VSK-8R

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Undisturbed Sample : UD
Core Sample : K
Standart Penetration Test : SPT
Pressuremeter Test : PMT
Permeability Test : PRB
Packer Test : BST

Boring Depth (m)	Sample Type	Lugeon	Strength (R)	S (Spacing)	UCS (Mpa)	E(Gpa)	N30 Graph 2550	TCR %	SCR %	RQD %	W	Weathering	Groundwater level	z (m)	Profile	Prepared by Dilara BAŞOĞUL Geological Engineer	Approved by Emre YILMAZ Geological Eng. M. Sc.
																DESCRIPTION:	
0																0.00-30.00 m. DILUVIAL, COLLUVIAL and TERRACE deposits River Gravels with Sand and blocky rock fragments Subrounded-rounded	
1	K																
2	K																
3																	
4	K																
5	K																
6																	
7	K																
8	K																
9																	
10	K																
11	K												▼				
12																	
13	K																
14	K																
15																	

Spacing
S1 Ext.close spacing
S2 Very close spacing
S3 Close spacing
S4 Moderately spacing
S5 Widely spacing
S6 Very Widely spacing
S7 Ext. Widely spacing

Strength Classification
(R0)<1 Mpa Ext. Weak Rock
(R1)1-5 Mpa Very Weak Rock
(R2)5-25 Mpa Weak Rock
(R3)25-50 Mpa Medium Rock
(R4)50-100 Mpa Strong Rock
(R5)100-250 Mpa Very Strong Rock
(R6)>250 Mpa Ext.Strong Rock

Lugeon (Conductivity)
<1 Low
1-5 Moderate
5-25 High
>25 Very High

Rock Quality Designation
0-25 Very Poor
25-50 Poor
50-75 Fair
75-90 Good
90-100 Good

Weathering (W)
W1 Fresh
W2 Slightly Weathered
W3 Mod. Weathered
W4 Highly Weathered
W5 Comp. Weathered



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Boring Depth (m)	Sample Type	Lugeon	Strength (R)	S (Spacing)	UCS (Mpa)	E(Gpa)	N30 Graph	TCR %	SCR %	RQD %	W Weathering	Groundwater level	Z (m)	Profile	Prepared by Dilara BAŞOĞUL Geological Engineer	Approved by Emre YILMAZ Geological Eng. M. Sc.
							2550								DESCRIPTION:	
15															0.00-30.00 m. DILUVIAL, COLLUVIAL and TERRACE deposits River Gravels with Sand and blocky rock fragments Subrounded-rounded	
16	K															
17	K															
18																
19	K															
20	K															
21																
22	K															
23	K															
24																
25	K															
26	K															
27																
28	K															
29	K															
30																

Spacing
S1 Ext.close spacing
S2 Very close spacing
S3 Close spacing
S4 Moderately spacing
S5 Widely spacing
S6 Very Widely spacing
S7 Ext. Widely spacing

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W2 Slightly Weathered
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W4 Highly Weathered
W5 Comp. Weathered



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GEORGIA NAMA KHVANI
HPP CASCADE PROJECT

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Coordinate.Y : 4703765
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D.Rig. Rotary : Hydraulic / Rotary
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BOREHOLE NO: BH-VSK-8R

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Packer Test : BST

Boring Depth (m)	Sample Type	Lugeon	Strength (R)	S (Spacing)	UCS (Mpa)	E(Gpa)	N30 Graph 2550	TCR %	SCR %	RQD %	Weathering W	Groundwater level	Z (m)	Profile	Prepared by Dilara BAŞOĞUL Geological Engineer	Approved by Emre YILMAZ Geological Eng. M. Sc.
															DESCRIPTION:	
30															30.00-42.00 m. LAVA BRECCIA and ANDESITE PORPHYRITE Light grey to dark grey With FeO concretion Moderately to Highly weathered (W3-W4) Very Poor to Good Rock Quality Very Closely spaced to Closely spaced (S2-S3)	
31				S2				26	-	-	W4					
32	K			S2				60	30	20	W3					
33																
34	K			S2				100	25	10	W4					
35	K			S4				100	85	80	W2					
36																
37	K			S2				100	30	25	W3					
38	K			S2				100	-	-	W4					
39																
40	K			S2				100	60	20	W3					
41	K			S4				100	80	80	W2					
42															End of Borehole : 42.00 m.	
43																
44																
45																

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S1 Ext.close spacing
S2 Very close spacing
S3 Close spacing
S4 Moderately spacing
S5 Widely spacing
S6 Very Widely spacing
S7 Ext. Widely spacing


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W4 Highly Weathered
W5 Comp. Weathered


PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	sistemzemin
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	1-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	0.00-9.00




0

1 m.





PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	sistemzemin
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	2-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	9.00-16.50





0

1 m.





PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	3-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	16.50-22.00
			
0			1 m.





PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	4-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	22.00-26.50
			
0			1 m.





PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	5-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	26.50-32.00
			
			1 m.





PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	6-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	32.00-36.50
			
			1 m.



PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	7-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	36.50-40.50
			
0			1 m.



PROJECT NAME	GEORGIA NAMAKHVANI HPP CASCADE PROJECT		
CONTRACTOR	ENKA	SUBCONTRACTOR	
	ENKA İNŞAAT SANAYİ A.Ş.		SİSTEM ZEMİN MÜH. İNŞ. TIC.LTD.ŞTİ.
BOREHOLE NO	VSK-8r	COREBOX NO	8-8
DATE DRILLED	27.02-10.03.2018	DEPTH (M)	40.50-42.00
			
0			1 m.

