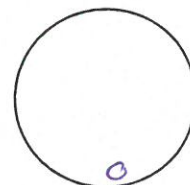


Mapping performed:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
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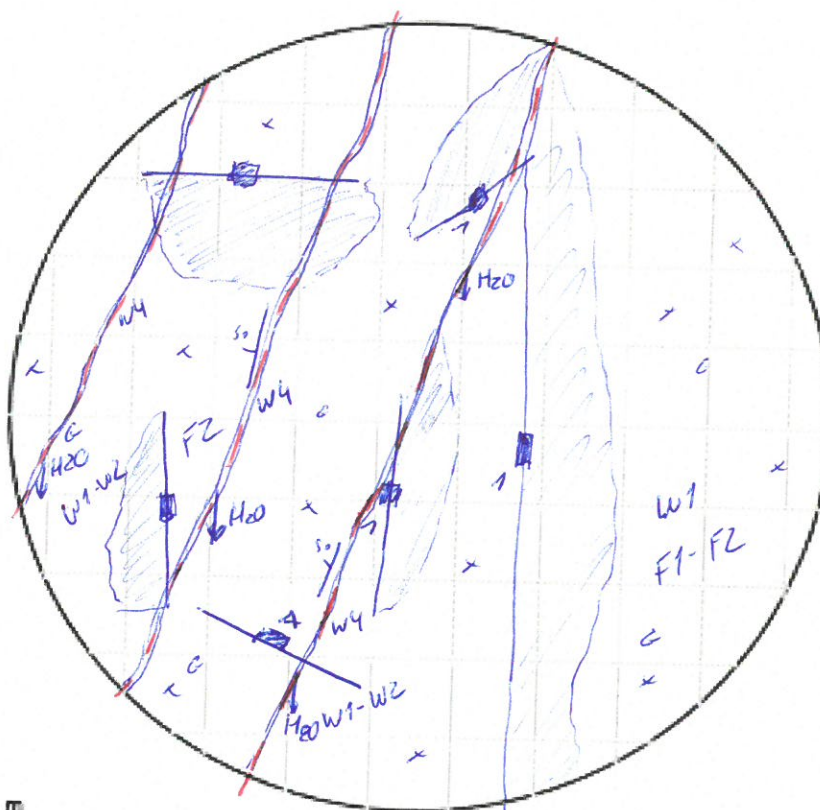
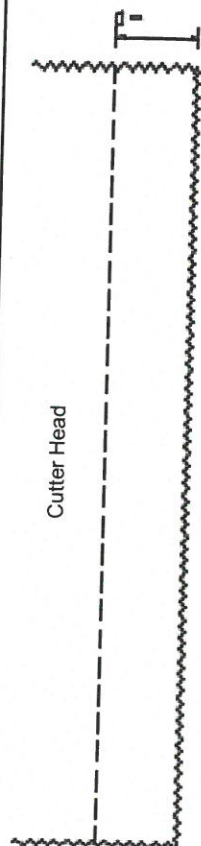
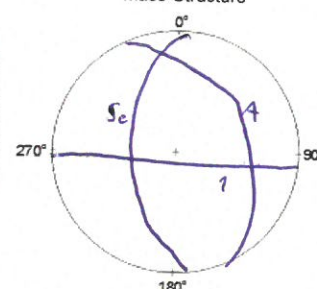
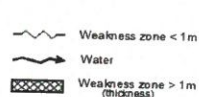
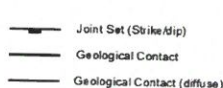
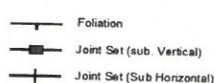
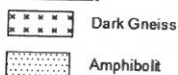
Plan view

Face of the Excavationm

Schematic position of the cutter head while mapping



Schematic Rock
Mass Structure

1.0 π 

Fracture set	1	A	S ₂			
Strike (α_s)	E-W	N-S	N-S			
Dip (α_f)	80-85°	~45°E	~60-70°W			
Spacing (cm)	—	—	—			
Length (m)	5-10	1-3	1-5			
Aperture (mm)	<1.0	<1.0	5-10mm			
Roughness	VII	VII				
Infilling	- / HARD SOFT <5mm	- / HARD SOFT <5mm	CLAY			
Weathering	W1-W2	W1-W2	W4			

CHARACTERISTICS		
Quartz	Veins <input checked="" type="checkbox"/>	Masses <input type="checkbox"/>
Garnets	Low <input type="checkbox"/>	High <input checked="" type="checkbox"/>
Water	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>
	Dripping <input type="checkbox"/>	Flowing <input checked="" type="checkbox"/>
	Quantity:	5-10 l/m
Fracturing	RQD:	70-80
Overbreak	Depth (cm):	5-50
	Amount (%):	30
Mixed face	Yes <input type="checkbox"/>	No <input type="checkbox"/>

DARK GNEISS WITH WIDELY SPACED FRACTURES BUT WITH WEATHERING (RUST AND/OR CLAY ON THEM) THAT GIVES BIG OVER BREAKS.

3 SMALL WEAKNESS ZONES (~2-50m) HIGHLY WEATHERED AND WITH WATER RUNNING FROM THEM, ALSO WITH CLAY

AGJV Geologist		
Date	Name	Signature
14/6/17	XLV	Xavier Niguel

Bane NOR Geologist		
Date	Name	Signature
14/6/18		BX

TUNNEL: INBOUND
CHAINAGE: 08+204
DIRECTION: NORTH

MACHINE: TBM 1
RING: 1986

DATE: 14/06/2017
HOUR: 09:15

REF. N°:
TBM1_20170614_08204_150

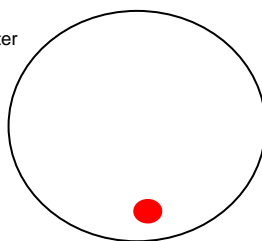
LEFT SIDE



RIGHT SIDE



Schematic position of the cutter
head while mapping



UPPER SIDE

FACE



AGJV Geologist

Date	Name	Signature
14/06/2017	XMV	

Bane NOR Geologist

Date	Name	Signature