

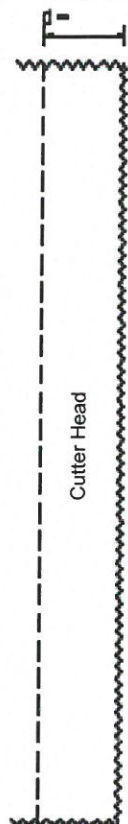
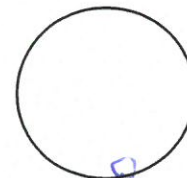
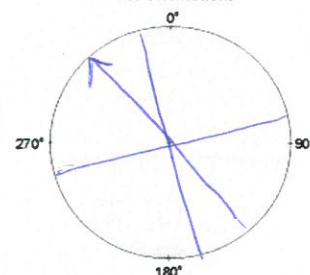
TUNNEL:  
CHAINAGE: 2+973MACHINE: TBM 1  
RING: 4886DATE: 30/08/18  
HOUR: 9:20REF. Nº:  
424

Mapping performed:

☐ Yes☐ No

Plan view

Face of the Excavationm

Schematic position of  
the cutter head while  
mappingSchematic Fracture  
Set Orientations

1.0 m

Light Gneiss

Dark Gneiss

Foliation

Joint Set (Strike/Slip)

Weakness zone &lt; 1m

Pegmatite

Amphibolite

Joint Set (sub. Vertical)

Geological Contact

Water

Joint Set (Sub Horizontal)

Geological Contact (diffuse)

Weakness zone &gt; 1m (thickness)

## DISCONTINUITIES

Fracture set	1	2				
Strike ( $\alpha_s$ )	NW-SE	E-W				
Dip ( $\alpha_f$ )	80-90	80-90				
Spacing (cm)	-	-				
Length (m)	1-3	~1 m				
Aperture (mm)	-	-				
Roughness	sub p	sub p				
Infilling	-	-				
Weathering	w.	w.				

## FACE CHARACTERISTICS

Quartz	Veins	<input type="checkbox"/>	Masses	<input type="checkbox"/>
Garnets	Low	<input type="checkbox"/>	High	<input type="checkbox"/>
Water	Dry	<input type="checkbox"/>	Moist	<input type="checkbox"/>
	Dripping	<input type="checkbox"/>	Flowing	<input checked="" type="checkbox"/>
	Quantity:	~ 14 m		
Fracturing	RQD:	80-100%		
Overbreak	Depth (cm):	5-20 cm		
	Amount (%):	1-5%		
Mixed face	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

## NOTES

TONALITE GNEISS LOW FRACTURED INTERSECTED BY AMP. DYKES  
AND PEGMATITE VEIN. SMALL FLOWING FROM THE AMP (CONTACT)

BN NOT AGREE WITH MFC IN FM ASSESSMENT

AMP = Amphibolite, DG = Dark gneiss, LG = Light gneiss, PG = Pegmatite, OB = Overbreak, WZ = Weak zone, LS/RS = Left/Right side

## AGJV Geologist

Date	Name	Signature
30/08/18	GC	[Signature]

## Bane NOR Geologist

Date	Name	Signature
30/08/18	-	[Signature]



TUNNEL: INBOUND  
CHAINAGE: 02+973  
DIRECTION: NORTH

MACHINE: TBM 1  
RING: 4886

DATE: 30/08/2018  
HOUR: 09:20

REF. Nº:  
TBM1\_20180830\_02973\_427

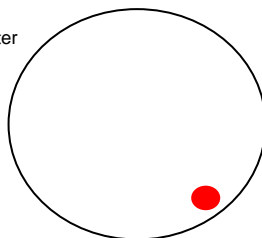
LEFT SIDE



RIGHT SIDE



Schematic position of the cutter  
head while mapping



UPPER PART



FACE



AGJV Geologist

Date	Name	Signature
30/08/2018	GC	

Bane NOR Geologist

Date	Name	Signature