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**Occurrences of Brucite, Serpentine, Forsterite and Hydromagnesite Bearing
Marbles, East of Shirkuh, Yazd**

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Abstract

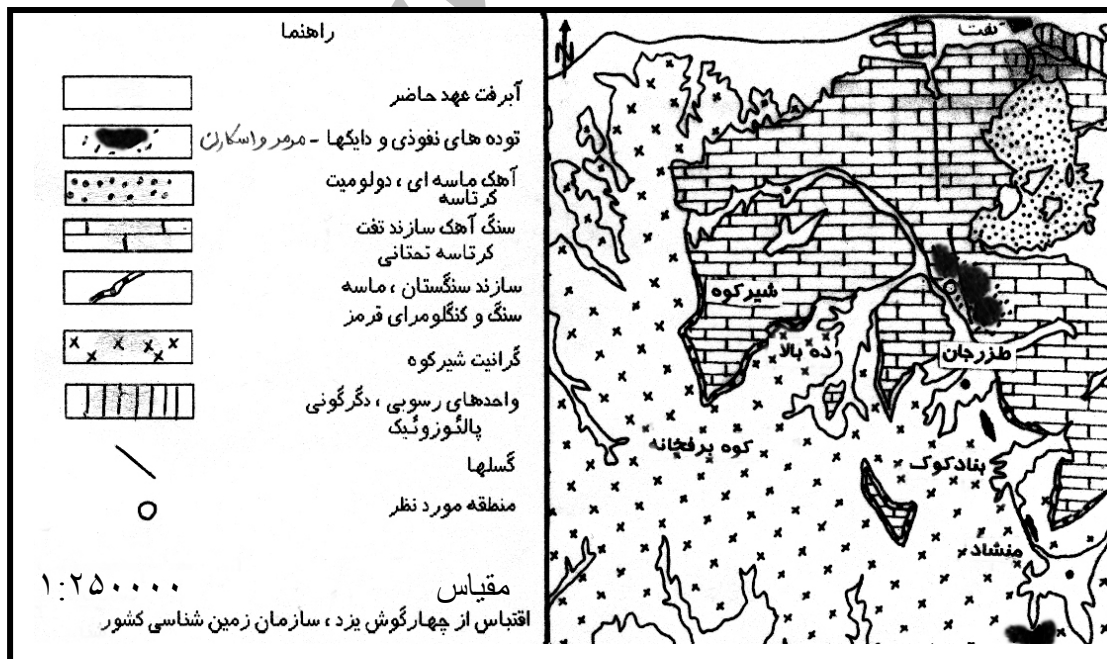
Due to post Cretaceous intrusions, various marble-skarn mineralization are formed in eastern Shirkuh Fault Zone. Marbles constitute the last zone in contact metamorphic aureole. Marbles are characterized by following mineral assemblages:

brucite+serpentine+forstrite+hydromagnesite+calcite+dolomite.

The marbles are undergone to pyroxene hornfels facies with the temperature between 450°c to 600°c (p<2kb).

The study has shown the paragenesis and texture relation of minerals as well as the three stages of decarbonation, hydration and carbonation.

Keywords: Shirkuh Batholite, Marble, Skarn, Brucite, Hydromagnesite.



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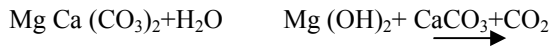
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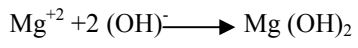
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(dissociated)

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cm

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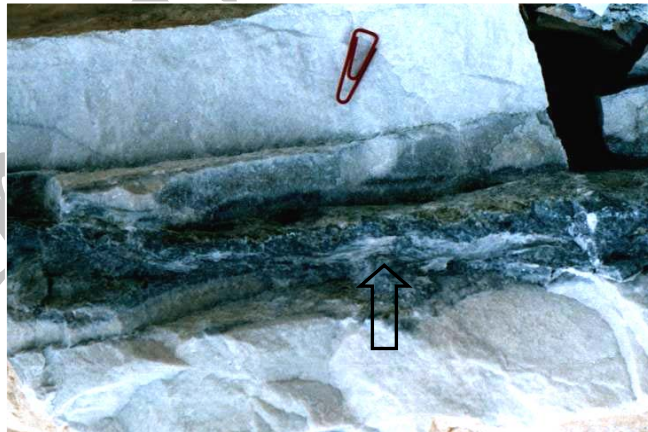
cm

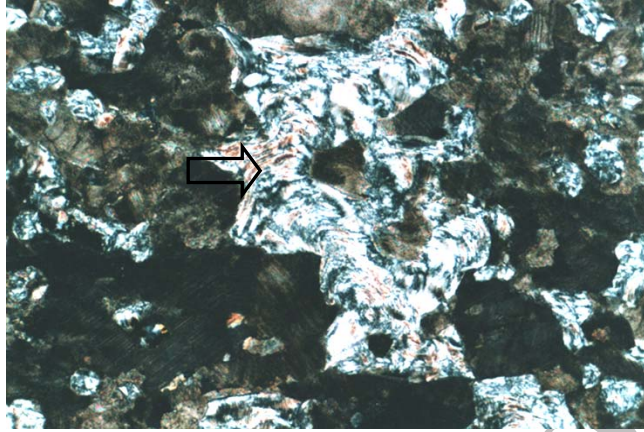
(PPL)

(XPL)

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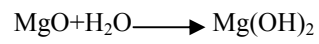
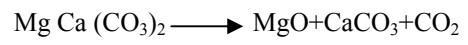


75 μm

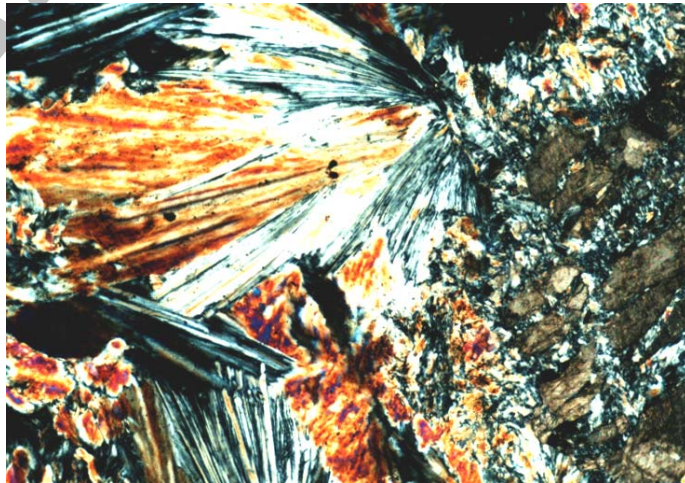
(XPL×50)

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(brucitization)

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PPL



75 μm

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(XPL×50)



XPL

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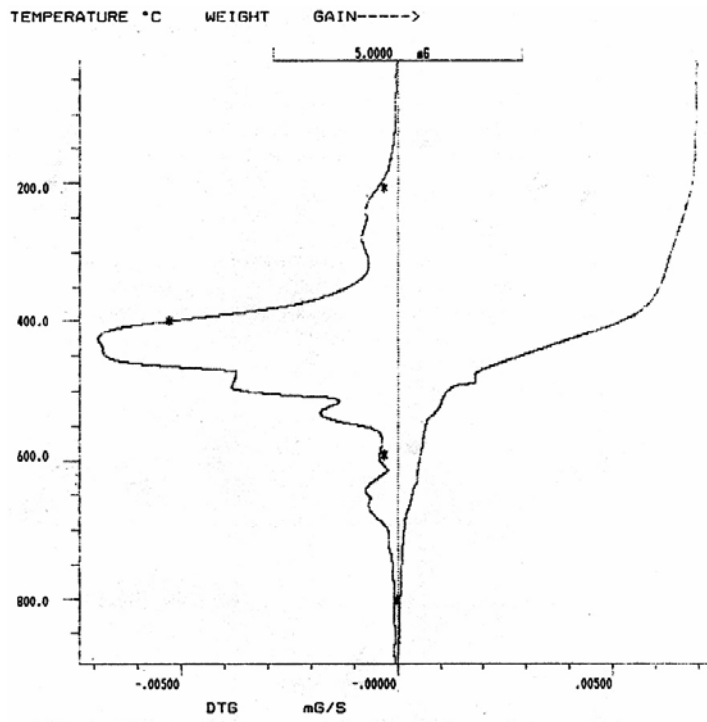
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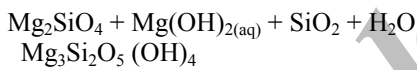
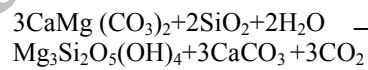
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- 1 . infiltration
 - 2 . atoll texture



(DTG, TG)

XH₂O, SiO₂



XH₂O

TG

() DTG

(

(Coban et al , 1995)

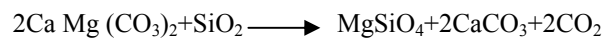
(Palache et al, 1951)

CO₂

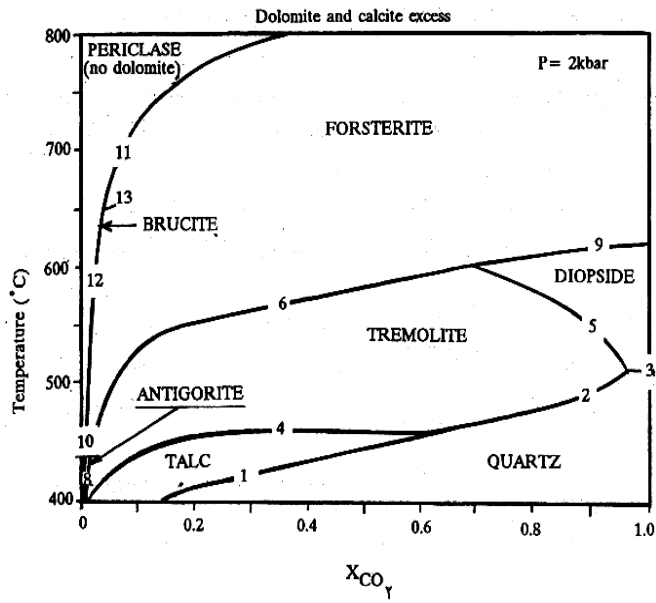
C

C

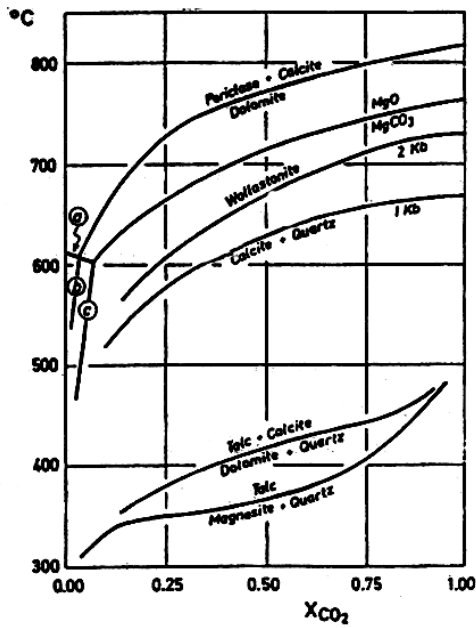
(Coban et al , 1995)



I. replacement



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X_{CO_2}

$CO_2 + H_2O$

CO_2

X_{CO_2}

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XH₂O

()

Eu

δ

()

()

δ

(hydration)

(infiltration)

XCO₂

XH₂O

CO₂

CO₂ SiO₂ H₂O

(decarbonation)

(carbonation)

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