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(Dreybrodt 1988; Zuber and Motyka 1996)

مقدمه

(Ford and Williams 1989)

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(Jenning 1985; White 1988)

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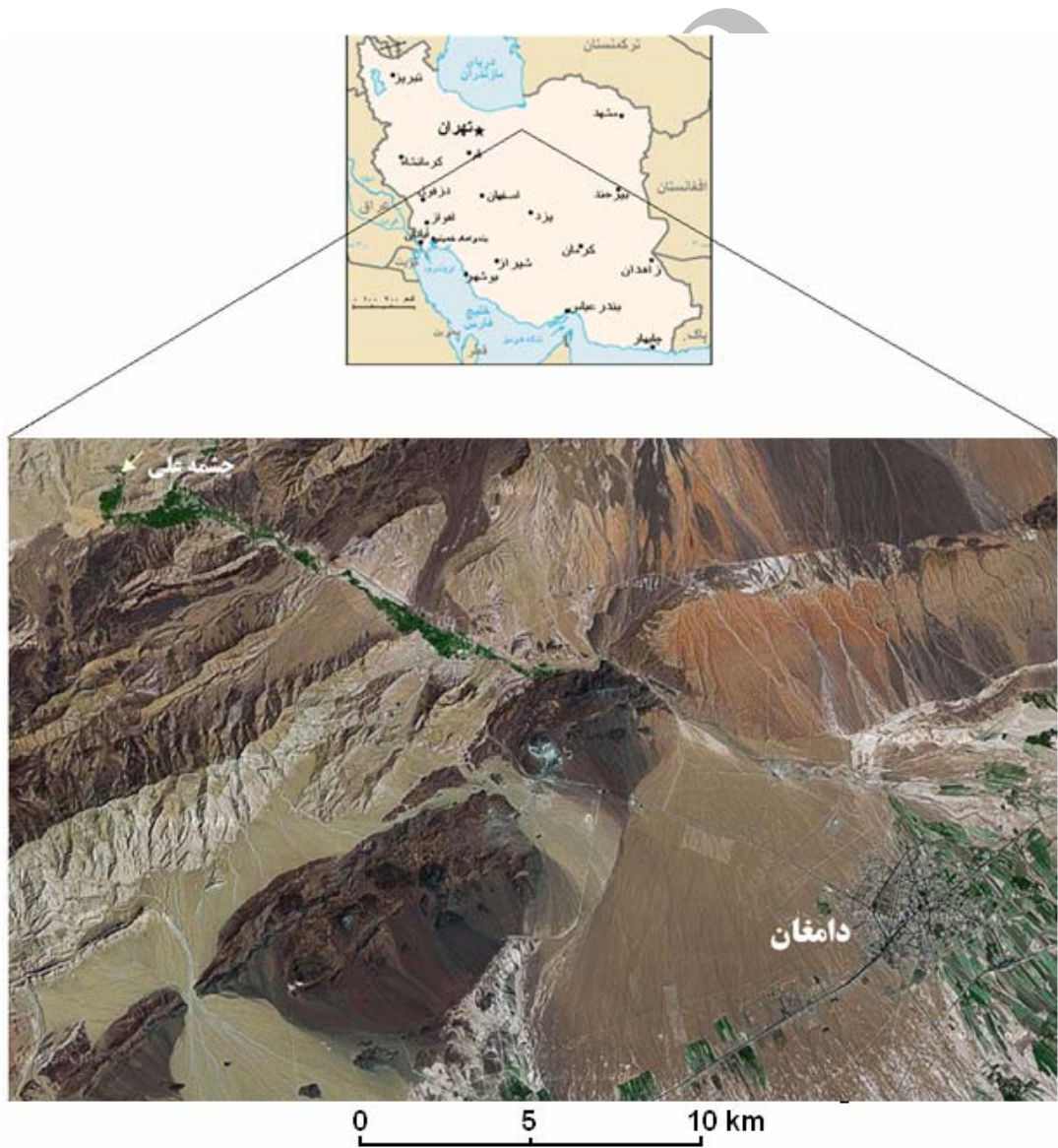
(Ford and Williams 1989)

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(Ahmadipour 1999)

(White 1988, Eisenlohr et al. 1999, Veni 2008)

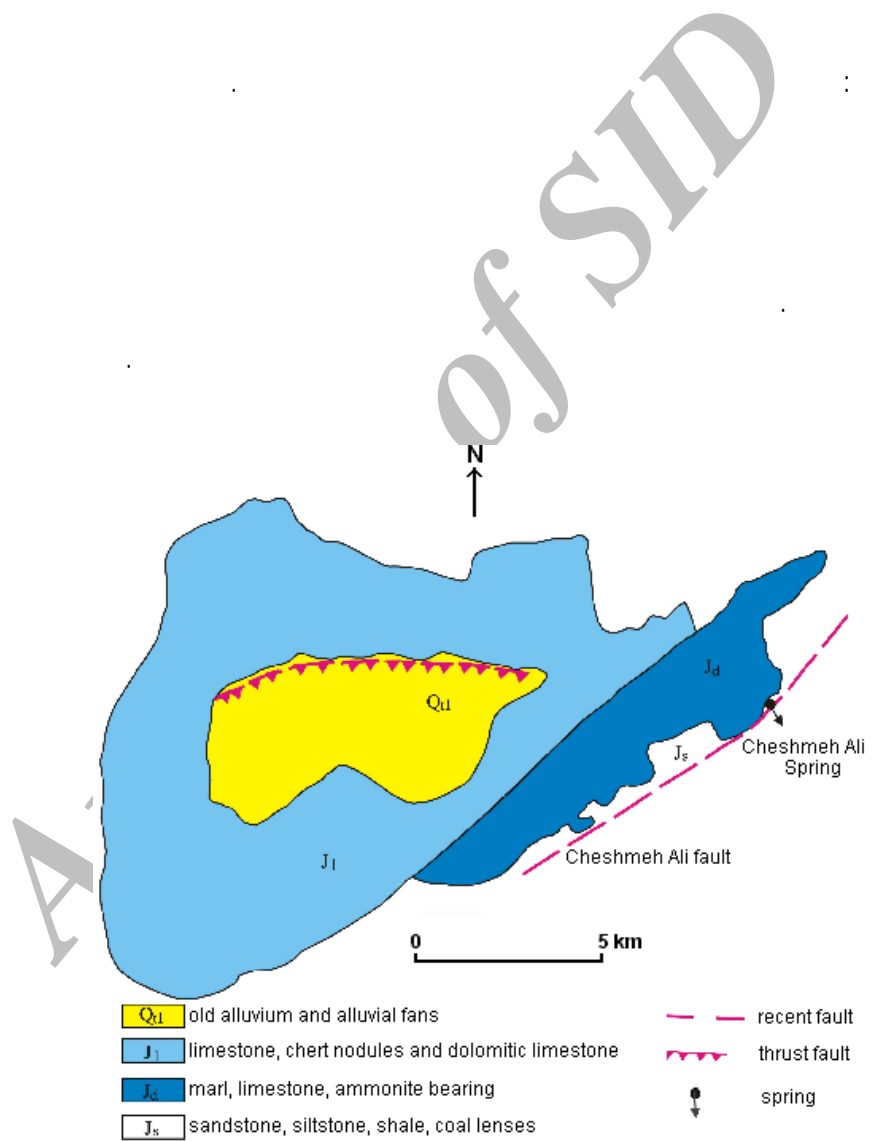
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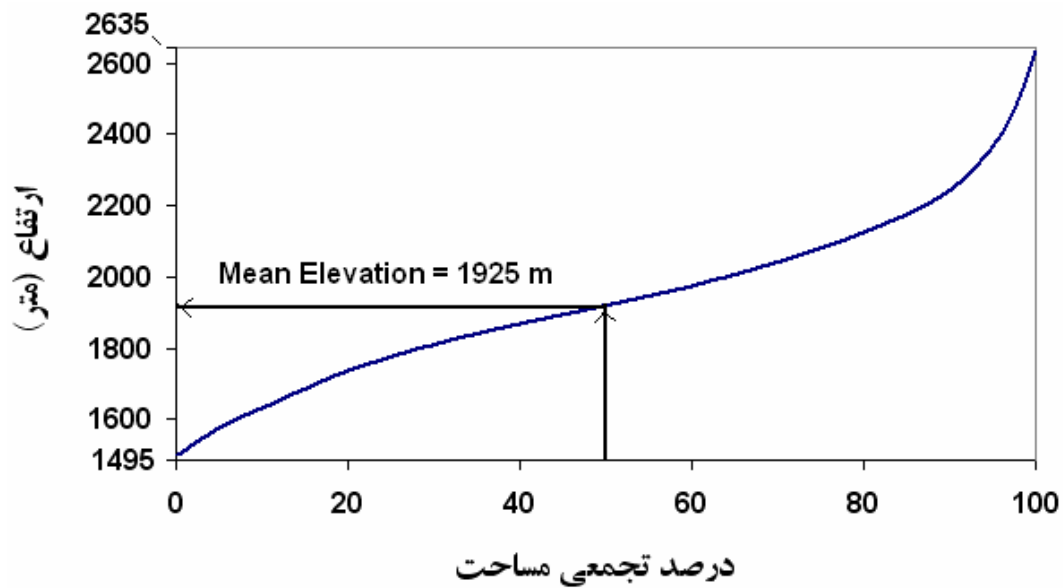
(Google Earth)

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1- Karstification

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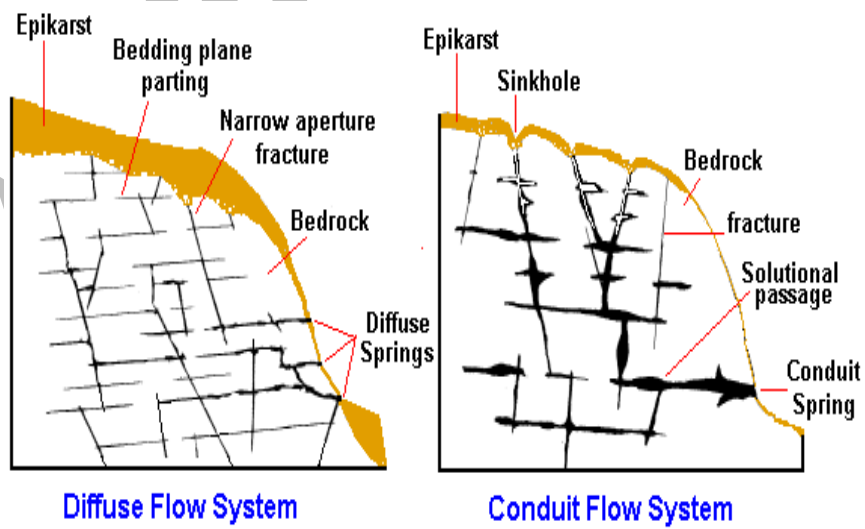
(Shuster and White 1971; 1972)

Atkinson 1977; Quinlan et al. 1991; Drew et al.)

(1996

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- 1- Conduit flow
 - 2- Diffuse flow

(Jacobson and Langmuir 1974)



(Karami 2002)

		pH

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(%)			
/	/	/	()
/	/	/	(°c)
/	/	/	
/	/	/	pH
/	/	/	
/	/	/	(mg/l CaCO ₃)
/	/	/	(mg/l)
/	/	/	(mg/l)
/	/	/	(mg/l)
/	/	/	(mg/l)
/	/	/	(mg/l)
/	/	/	(mg/l)

(Milanovic 1981)

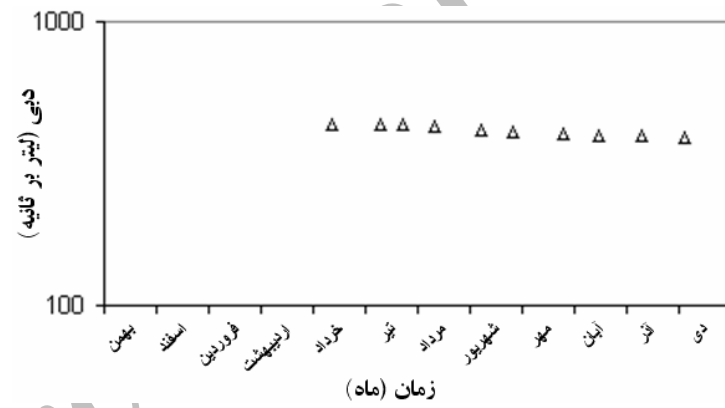
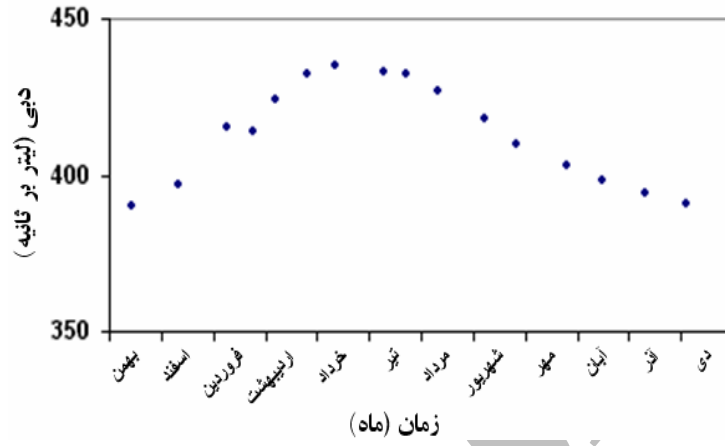
$$\alpha = \frac{\log Q_0 - \log Q_t}{0.4343(t - t_0)} \quad (1)$$

Q_t Q_0

α

t_1 t_0

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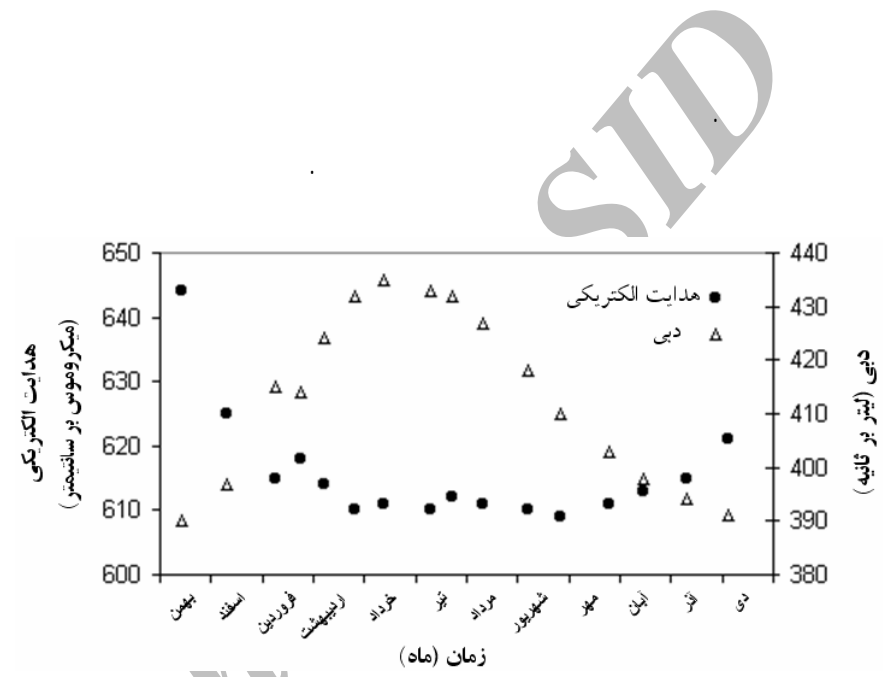
Arc

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$$5.2 \times 10^{-4}$$

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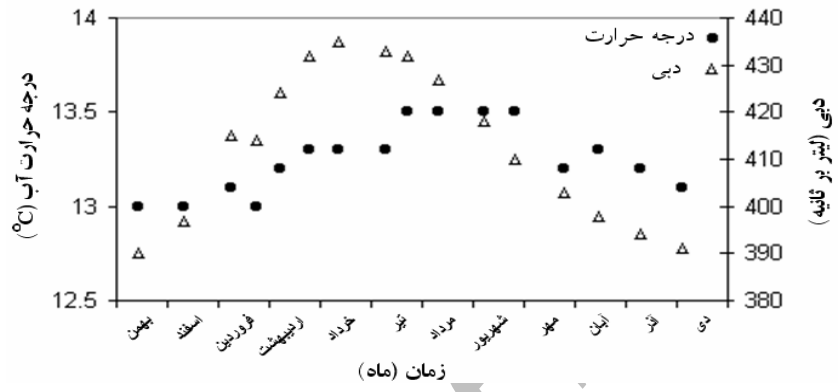
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