# **Geopolymer Camp 2014**

## The NEGUEV Project

The Negev. A desert area between the borders between Egypt, Jordan and Israel. Mountains rising to over a thousand meters and carved by rivers flood valleys ...



 But precisely these rivers flood exist fault of obstacles large enough to hold the water and silt they carry during winter rains.

Indeed, it falls into this region about 129 mm of rain between November and March, 1290 cubic meters of rain water per acre (hectare).

 Despite this ability to rain, no deductions maintains a desert flora and erosion continues its work to eradicate nutrients likely to maintain or develop land cover, and consequently the occupation of sites.



 In addition, the mountainous configuration shows that it is possible to construct retained by micro-dams, whose surface corresponds to deductions of 1 hectare, with buildings with a maximum height does not exceed 5 meters.



 The ground (earth materials) is clayey, chalky places, with sources close sodium carbonates, sodium, chlorides etc. (Dead Sea).



### The objective:

- Retain rainwater for irrigation storage
- Retain the sludge settling in dams to extract the strings to cultures around dams
- Avoid gully watershed preserving the flora and fauna
- Encourage the establishment of agriculture and forestry.

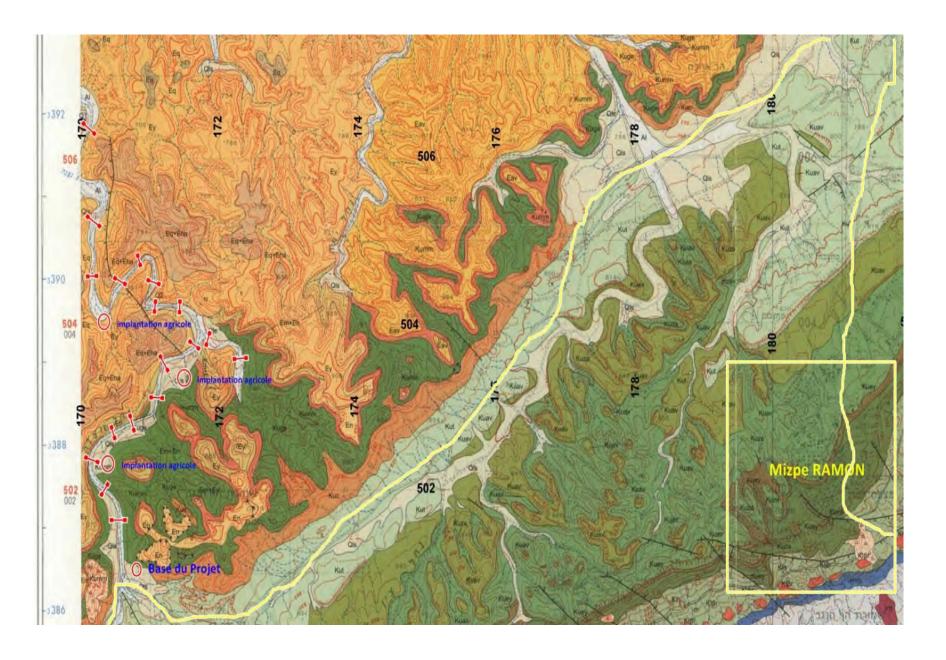


 The place: Near Mizpeh Ramon, subject to obtaining concessions from the Israeli government:

Altitude: 500-900 meters

Number of dams: 17

• Number of tanks: 15



With Courtesy permission of the geological insitute of Israel

## The project:

- -1 Build dams in reconstituted stone blocks on the typical model of the Construction of the pyramids:
- Block of reconstituted stone from 1 to 20 tons (0.25 to 5 cubic meters) cast in situ.
- Following the vertical height differences of each block on the log model positioning.
- Length of dams less than 200 meters

- -2 Build water storage tanks on the model of the "formula of Joseph\*."
  - Waterproof coatings on geopolymer wells dug in the rock
  - Indirect on dams filling overflow after settling connection.
  - Use of tanks for local irrigation with solar pumping.

<sup>\*</sup> Joseph Amenophis son of Hapou : read the book : « The Pyramids: An Enigma Solved », from Joseph Davidovits. Institut Géopolymères, isbn : 9780557021192.



Picture of the erosion of clay near Mizpé Ramon .

 Such a project can also be a collective effort through a carrier system as Kickstarter, Visitable link <a href="https://www.kickstarter.com/">https://www.kickstarter.com/</a>

#### Sources:

http://en.m.wikipedia.org/wiki/ Mitzpe Ramon#Geology and climate

Geology israelian website: <a href="http://www.geology-israel.co.il">http://www.geology-israel.co.il</a>

#### Video links:

http://www.youtube.com/watch?v=wRyAgTQICE4 http://www.youtube.com/watch?v=7-BqMX\_Rd3o http://www.youtube.com/watch?v=VwHx\_oedts http://www.youtube.com/watch?v=NLavvhUPBQM

### And most importantly:

http://www.youtube.com/watch?v=tjBugtV8GHc



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