

GENERAL ADVICES/ WARNINGS

- Act responsibly. Be respectful.
- Do not throw litter. Bring a bag to place the litter in and, later on, leave it in the city or nearby town.
- Respect the flora, fauna and the geological resources of the circuit.

- Escaba has limited lodging, first aids and a police station.
- It is possible to rent navigation.
- Check on the vehicle condition. A dirt mountain road represents the last 10 km (Corralito - Escaba).
- Make sure to bring provisions and a first aid kit.
- If a fire is lit up, do it in authorized areas and later on make sure it is entirely extinguished.

Sandstones

Sedimentary rock formed by the accumulation mainly of quartz's grains. This accumulation could have been generated as a result of a fluvial or eolic transport.



Schists

Metamorphic rock generated out of a sedimentary rocks, which has varied its mineralogic composition through a process named "metamorphism" that involves factors such as pressure and temperature.

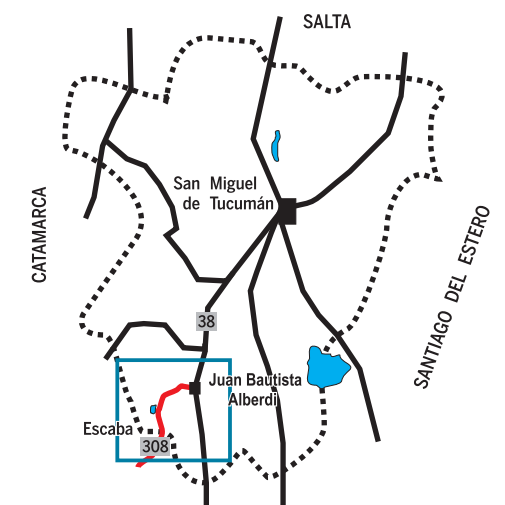


Granites

Igneous rocks that have been formed through the crystallization of magmatic material, mainly composed by minerals such as Quartz, feldespars and Micas.



GUIDE FOR ROCK IDENTIFICATION IN THE FIELD



Recommendations:

- Be careful when driving along 38 National Route during sugar-making season.
- Bring insect repellent.
- Good alternative to sleep over in Escaba and enjoy the place.

CHARACTERISTICS

Longitude: 270 kilometres

By vehicle: full day circuit

Maximum altitude: 1.200 m.a.s.l.



DESCRIPTION OF THE ROUTE

PARADA 1

Situada un kilómetro antes de la localidad de Hualinchay. La misma se ubica a la vera de la ruta provincial y sobre la barranca que ha labrado el río homónimo.

A XX minutos de la parada anterior y sobre los afloramientos del margen sur del camino se observan estructuras generadas por vida primitiva.

PARADA 2

Se accede a ella por el camino que sube a hacia Tolombón a partir de un desvío en Hualinchay.

A XX Kilómetros del inicio del camino se aprecia corrimientos y estructuras de descalze de las laderas de las cumbres calchaquies.

PARADA 3

A XX kilómetros del inicio de la subida y sobre una pequeña quebrada se halla un punto donde se destacan procesos erosivos estivales.

Km. XX. Capilla de Lara. Zona cercana ala cumbre.

PARADA 4

Sobre una pared subvertical en el margen oeste del camino se observan pseudofósiles.

Km. XX. Area de cumbre. Carcavamiento incipiente.

PARADA 5

A XX kilómetros del punto anterior se encuentra una importante escombrera donde se aprecia un bloque con estructuras producidas por corrientes en un fondo marino hace 500 millones de años.

Km. XX. Faldeos alterados por procesos vinculados a la presencia humana en la zona. Fin de la ruta. Se recomienda regresar a San Pedro de Colalao o continuar la ruta hacia los Valles Calchaquies enganchando con el circuito 2.

SIGHTS OF TUCUMAN FOREST

ENGLISH



SIGHTS OF THE TUCUMAN FOREST

This geo touristic circuit offers a view to the most attractive dykes of the province, 130 km away from the capital city. The offer is framed along the Narvéez Range to the West, and Tucumán's plains to the East. Along the sweep that runs between the thick pedemount forest and the pastures ground of high, it will be

possible to observe rocks that represent a 500 million years old marine bottom. These are strongly deformed and recrystallized by the pressure and temperature to which they were submitted through their geological history, as well as sediments of lakes and rivers of about 60 million years.





STOP 1

Leveler dock of Marapa Shugar Mill
At this stop and over the northwest margin of the river, a wall of argillaceous material displays development of soil and two levels of paleosols indicating ancient climatic conditions.



STOP 2

A modified natural river bed
Before being constructed the Escaba sling, the Marapa river formed its stream through the mountain for more than 50 million years. The natural erosive processes that gave place to the defile through which the route runs are nowadays Controlled by the dam.

STOP 3

Pressure and temperature effects
These rocks were generated out of sediments of a marine bottom. After an important burial its character is modified by the increase of temperature and pressure to which they were encountered, generating a mineralogic recrystallization -processes Known as "metamorphism".



STOP 4

The rock "flows"
Once reached certain levels of temperature and pressure, the minerals that constitute the different rocks melt and move giving place to shapes and structures that have nothing to do with the original rock.



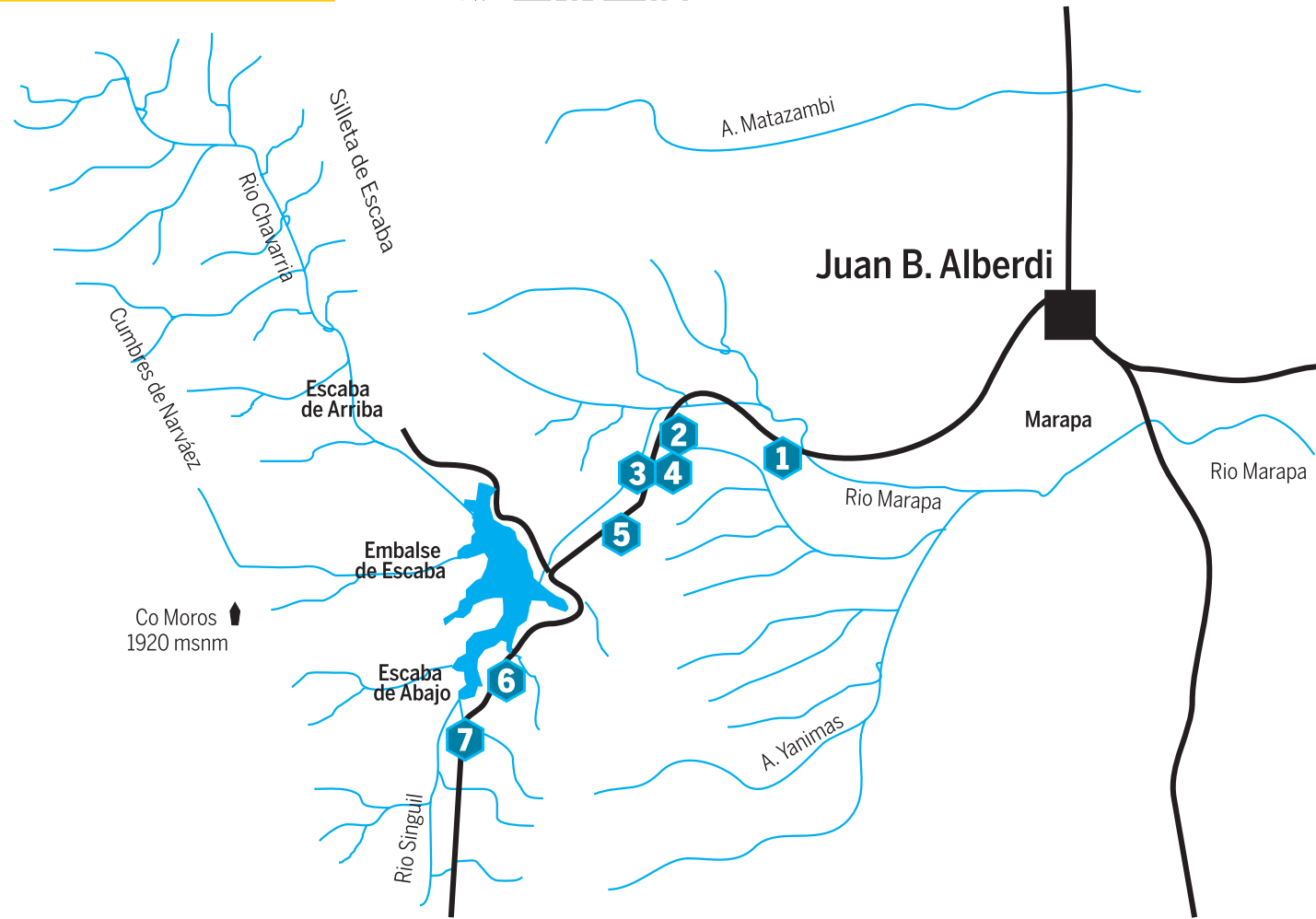
STOP 5

The mountain moves
The upheaval of the mountains of Tucumán's west, as well as the Andean mountain range is the result of the thrust that the Pacific plate makes by submerging itself under the South American plate. This thrust generates elevation, with deformation and faulting of the continental rocks, situation that can be appreciated in this block that "slips down" over the Route by means of a faulting surface.

Detail of the surface of the block's shift. In geological terms, it is named "Fault-mirror" because of the polish surface that shows in regards to the rest of The rock.



GeoRoute
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STOP 6

Functioning rivers and volcanoes
The sandstones that are appreciated on the way that leads to Escaba de Abajo were deposited by shallow rivers of about 50 million years. While these rivers were developing, an intense volcanism was taking place towards the Cordilleran sector, which is reflected in the levels of whitish tufas intercalation that represent periods with numerous volcanic ash clouds, covering the region sporadically.
(A) Shapes of modern erosion that take advantage of weak areas in the surface of the sandstones.
(B) The whitish levels intercalated in the sandstones are tufas and constitute periods of "volcanic ash storms".

STOP 7

Fluidity of materials
The rocks of the region had such state that it existed an important mobility of its mineral components, situation that is well appreciated in the scattered clasts in the Singuil river, nearby the campsite of Escaba de Abajo.



GEOLOGICAL TIME CHART

PRECAMBRIAN	PALEOZOIC						MESOZOIC			CENOZOIC		
	Cambrian	Ordovician	Silurian	Devonian	Carbonif.	Permian	Triassic	Jurassic	Cretaceous	Paleogene	Neogene	Cuaternary
STOPS 2, 3, 4, 5, 7 Age of rocks forming the main cores of Tucumán ranges. 542 millions years ago	There are no rocks of this age in this route						There are no rocks of this age in this route			STOP 6 - Erosion and formation of the actual shape of the area. - Sedimentation of multi-colored rocks in the Calchaquí Valley - Rise of the Andes 65,5 millions years ago		