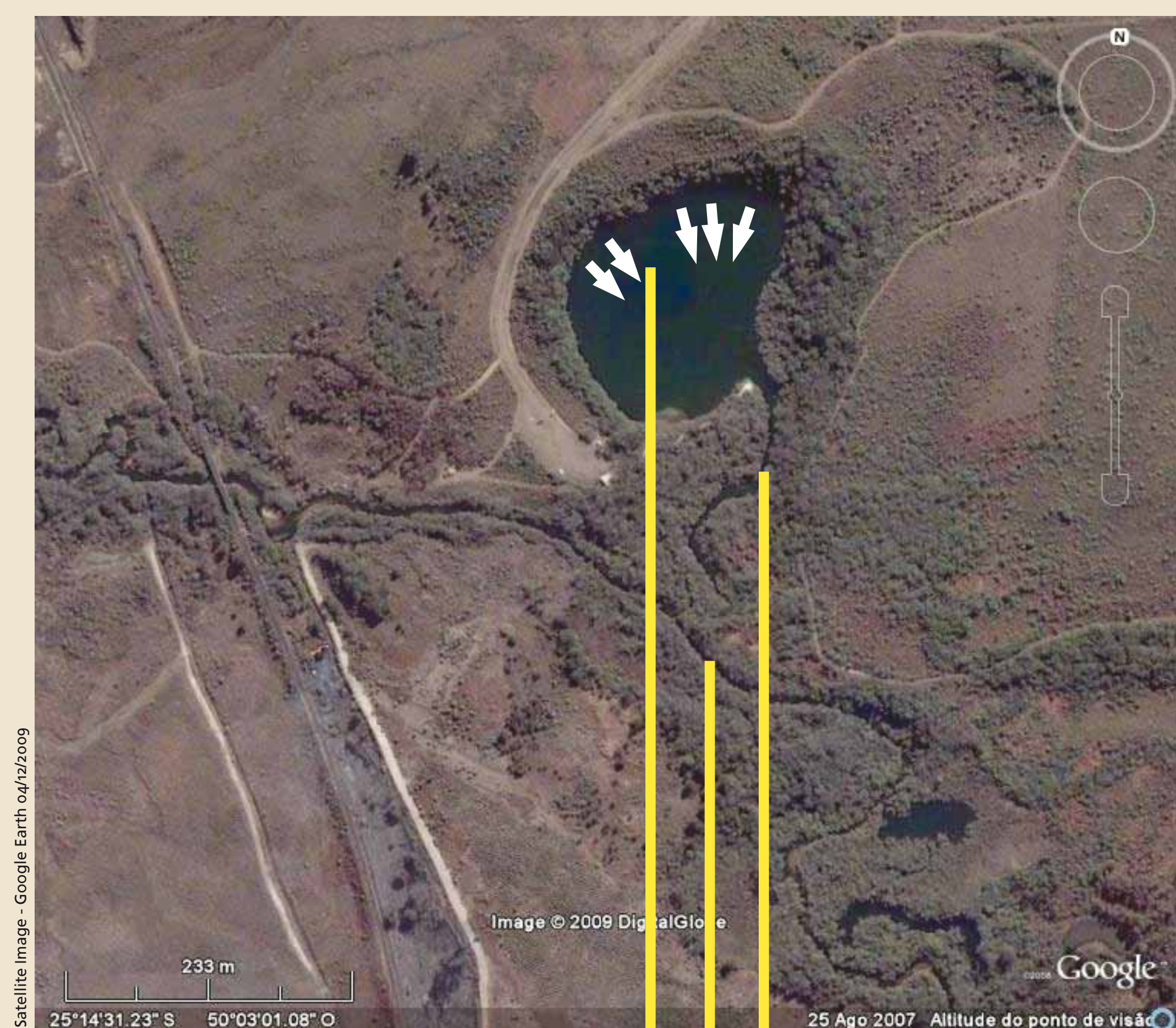


# The Golden Pond

## The origin of the Golden Pond



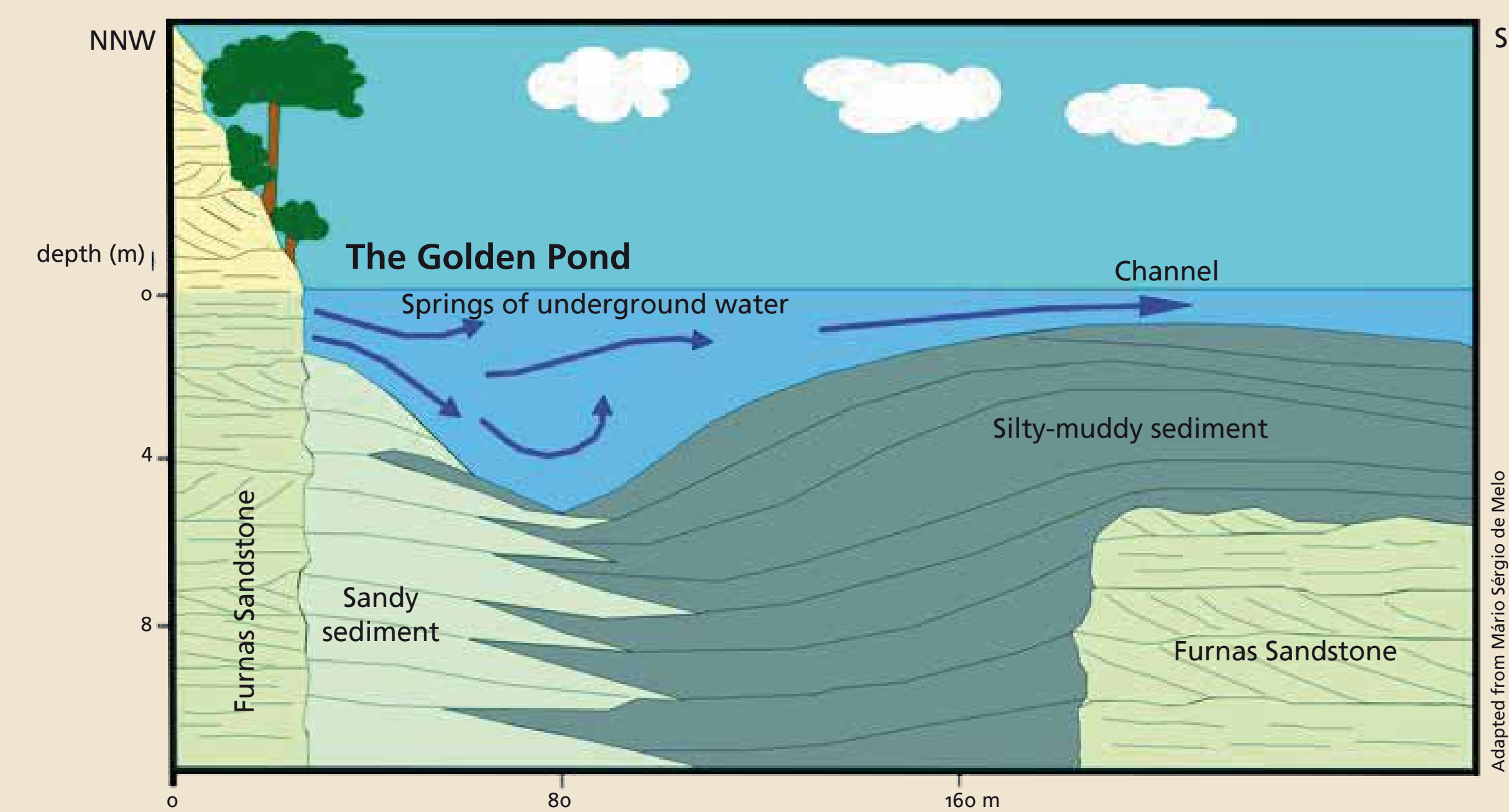
Named after the color in which its surface reflects sunlight at certain times of the day, the Golden Pond is actually a vertical cave (for Portuguese term furna) filled with sediments, but whose origin is the same as that of other similar features in the Campos Gerais. Dating of plant debris collected from 12m below the bottom of the Golden Pond indicate an age of 11,700 years. However, as probing did not reach the base of the sediment pile, older ages and larger depths are expected. Based on the average depth of other such cavities in Vila Velha, a thickness of up to 50m is considered. Only by reaching the base of the sediment pile underneath the pond can the actual depth and age be determined.



The Golden Pond is found at an altitude of 800m. Its shape is slightly elliptical, with a major axis of 200m and a minor axis of 160m. Its water body, whose depth varies between 0.4 and 5.4m, is connected to the Guabirola River by a sinuous channel that extends for approximately 220m. Along its northern border area, there are five water springs that reach the Guabirola River. Because of the small, lower than 1.5m level difference, water flows from the channel to the pond during flood periods. A large amount of fine sediments ("mud"; actually particles finer than sand) is then carried into the pond.

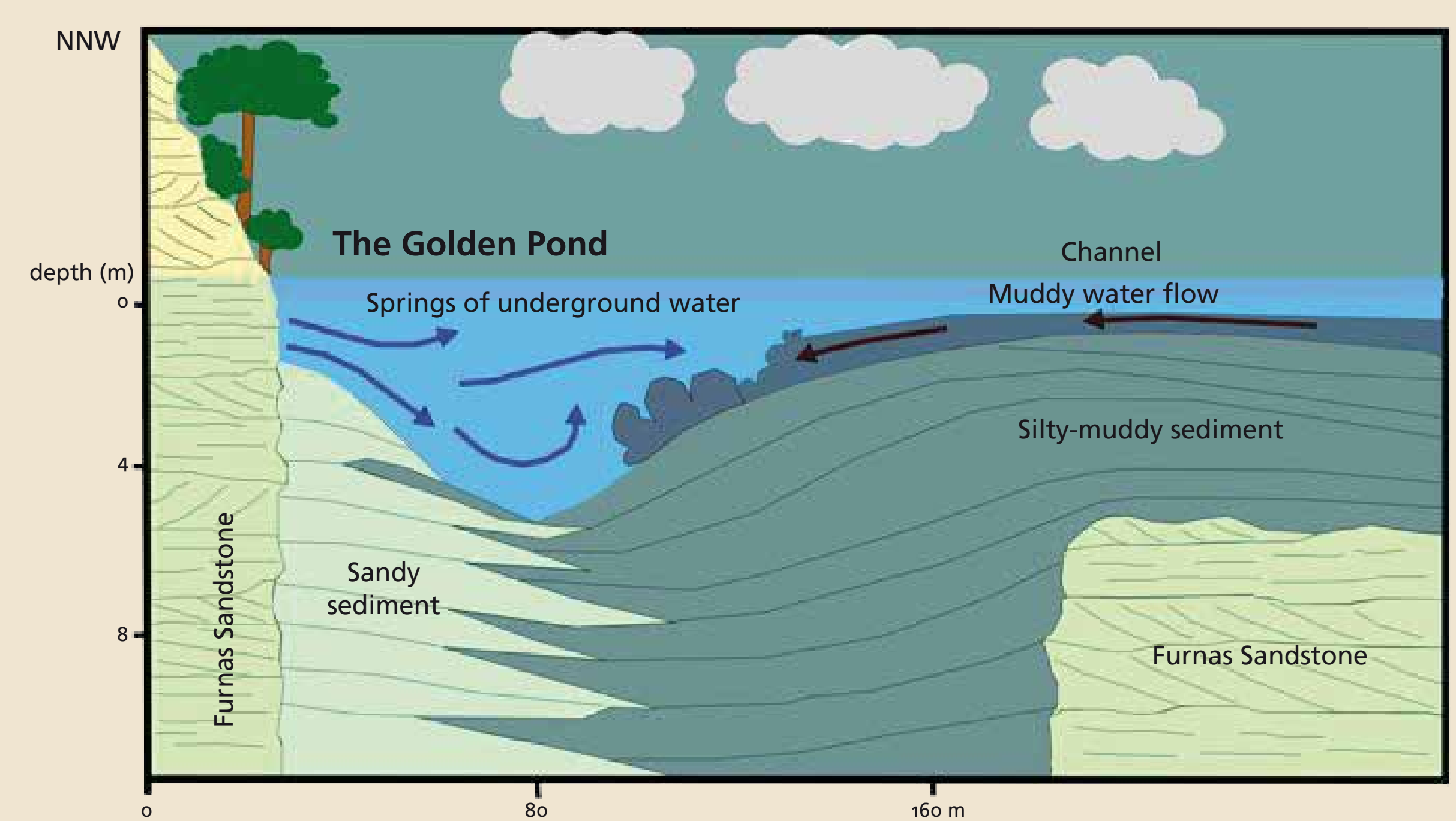
## The sedimentary infilling of the Golden Pond

### NORMAL FLOW



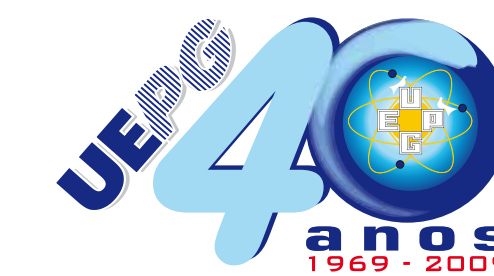
The springs along the northern border of the pond are responsible for its crystalline water as sandstone acts as a natural filter. The Golden Pond is a true natural aquarium where fish, including those that reach it from the Guabirola River find a quiet refuge for breeding. The pond has been filled with different sediments. In the northern parts, near the water springs sediments are sandy. In the southern parts, near the channel sediments are silty-muddy.

### REVERSE WATER FLOW



During periods of flooding of the River Guabirola, the flow of water through the channel that connects the pond is reversed, ie, water flows from the river to the pond, flooding it with muddy water that carry fine sediments that slowly deposit in its southern portion. In the northern portion of the constant upwelling prevents fine sediments from depositing, thus making the lake deeper, with coarser sediments partly transported by the flow of underground water.

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