Creek in Hanging Visual Interpretation

The image under investigation in this report is of a waterfall in hanging lakes. The visual shows water flowing down a cliff on a hanging lake (Waterfall in hanging lakes, 2021). I took the image with my Iphone 11 Pro max while having leisure time with my friends. The photograph is not edited as it represents the actual background and inclination of the waterfall as water flows faster on the steep fall.

The image shows water flow over a submerged obstacle which is a steep cliff which forms a right-angled triangle at the base. The water flow is fast given the high velocity it gains on the steep slope. The speed of the water decreases as it flows to the ground on the hypotenuse of the triangle-formed on the flow. Water flow on the waterfall is due to the gravitational force acting on the water as it pushes the water down on the round. Given that the fluid is water flowing on the cliff, we can measure the non-dimensional scale in Reynolds number using the formula (Lucas et al., 1999):

$$"Re = \frac{VD}{v} = \frac{\left(9\frac{m}{s}\right)(2.3m)}{12\frac{m^2}{s}}$$

$$"Re = 6.21$$

Where the velocity of 12 meters per second was chosen to show high decreasing velocity of the water as it moves down the cliff. The Reynolds number was 1.725 implying a transitional flow of water on the cliff.

The photograph is in the form of jpeg with a resolution of 4160 * 1872 taken one-distance from waterfall. The camera on the Iphone Pro max 11 was a digital camera. It shows

fast moving water and I like the speed at which the water moves forming a beautiful scenery at the fall. Although it was fascinating to explore the waterfall, the picture was essential in writing this report for my studies.

References

Lucas, G. P., Cory, J., Waterfall, R. C., Loh, W. W., & Dickin, F. J. (1999). Measurement of the solids volume fraction and velocity distributions in solids–liquid flows using dual-plane electrical resistance tomography. Flow Measurement and Instrumentation, 10(4), 249-258.

Waterfall in hanging lakes. (2021). [Image]. Retrieved from https://youtu.be/_ETmFvZbvgo