Those people who've stood in awe near the brink of thundering Niagara Falls will tell you that "that's one long drop".

It is. In fact, from the top of Canada's Horseshoe Falls to the turbulent gorge below, the drop is 158 feet.

Very impressive. That's why it's one of the Seven Wonders of the World.

However, did you know that we in Northern Ontario, and more specifically at Creighton mine, have a waterfall that knocks the Niagara River's free-fall efforts right into a cocked hat?

It's true! At Creighton mine number nine shaft, which, at 7,137 feet is the deepest continuous mine shaft in the western hemisphere, there's a waterfall more than 23 times the height of Horseshoe Falls!

Admittedly, the Creighton cataract at four inches wide is a little narrower than that 3,010-foot wide short-fall Niagara showoff, but a free fall of 3,700 feet is really something to say "wow!" about.

It all started back in 1972 when it became obvious to Phil Oliver, then mine engineer at Creighton and now supervisor of rock mechanics, that a proposed mine water clarification station slated for installation on the 6,800-foot level in 1974 would create a situation that would result in water demand outgrowing supply.

The mine's existing water supply system, installed in the mine's three, five, six and eight shafts, just wouldn't be able to cope.

After due deliberation, it was decided to revise an unused water line that was already installed in number nine shaft to boost water delivery to the lower levels of the mine. Then the fun began.

At nine shaft, working levels are at and below the shaft's 3,800-foot mark. In

On surface at the Creighton mine number nine shaft sub-collar, maintenance foreman, Marven Akerman, reads the water meter at the flow control station.

In the shaft compartment, with its bottom end located at the 3,800 level of the mine, this is the 100-foot long, 14-inch diameter water system reservoir.

very own waterfall

It's at Creighton and it could be the world's highest

other words, water isn't needed until it reaches that depth.

When it's stacked up, water, like any other substance, creates pressure, and at the bottom of a full 3,800-foot pipe, the pressure would be trying to burst the pipe's seams with a mighty thrust of 1,650 pounds per square inch. Allowable operating pressures range between 160 and 200 psi.

In order to control line pressure in the untapped upper 3,800 feet of the supply line, Phil Oliver could have suggested the installation of a series of pressure reducing valves — but he balked.

Costly, and notorious for seizing up in the open position, the valves would have to be installed at 750-foot intervals to suit the shaft's service stations, and if one valve did seize, then it would create a non-allowable and much frowned-upon pressure of 500-psi in the complete system below itself.

Phil figured there just had to be a better way, and then he remembered something.

While sinking number nine shaft, the shaft sinkers had used a crude but safe and effective method of providing their drills with water — right down to the

In the 3,800 level shaft station, electrical foreman, Gene Liciotti, left, and electrical leader, Richard Laframboise, check the water reservoir's high and low pressure sensors.

Mine engineer when the Creighton nine shaft water line was conceived and installed, Phil Oliver considers a model showing the mine's ore body and its various shafts.

Our very own waterfall

7,137-foot level. They had installed a drum on their sinking rig and filled it with a controlled flow via an open-ended pipe from surface. A 7,137-foot waterfall with no pressure problems at all!

The mine engineer had his answer.

The final installation is considerably more sophisticated than the sinking set-up.

A substitute for the sinker's drum, and serving as a reservoir, a 100-foot length of 14-inch diameter pipe was installed vertically in the shaft with its bottom end at the 3,800-foot level. High and low pressure sensors in the 14-inch pipe send electrical signals to control valves on surface, which regulates a free-fall water supply — our 3,700-foot waterfall — to the vertical reservoir.

A fail-safe system, the reservoir has an overflow connection installed at its top end, and an orifice plate, located at the metering and flow control station on surface, restricts supply to a maximum of 350 gallons per minute.

Easily accessible at working levels between the 3,800-foot level of the mine and the bottom of the shaft, water pressure in the lower section of the nine shaft line is controlled in the conventional manner, using pressure-reducing valves spaced at 400-foot intervals.

Being able to brag about possibly having the highest waterfall in the world — that should start something — isn't all. How about cost savings brought about by eliminating all those pesky pressure control valves, and their maintenance, above the 3,800-foot level?

Furious slide rule activity produced the answer.

The cataract caper resulted in a saving of $30,000.

Now that's what you call your real happy ending.

Drinking the waterfall from the cooler in the 3,800 level refuge station are, left, driller Roger Rousseau and stope boss, Nick Bajus. "It's wet and good," said Roger.