

# Slezská Harta Dam on the Moravice River , Czech Republic

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## Generally

The rockfill dam Slezská Harta is being built as a part of the complex of works after the project "The improvement of the Ostrava regional water supply system from the Slezská Harta reservoir on the Moravice river". Ostrava regional water supply system (ORWSS) provides drinking water supply for the inhabitants of a large part of Northern Moravia. The Slezská Harta reservoir, situated upstream close to Kružberk reservoir, will enable more effective utilization of this source in amount of water and its quality and will produce the additional capacity of 3.5 m<sup>3</sup>s<sup>-1</sup> in the final period. Besides this main purpose the substantial reduction of floods will provide as well as improve low discharges on the Moravice river below Kružberk reservoir.

## Main parameters of the Slezská Harta reservoir

type of storage	level m o.s.l.	volume m <sup>3</sup>	water area m <sup>2</sup>
permanent-storage	452.00	8,355,575	1,222,730
useful (normal)	497.00	193,077,130	7,494,120
controllable	497.00	201,383,505	8,716,850
retention	498.80	16,119,604	517,675
total	498.80	217,503,109	9,234,525

## Instrumentation for monitoring water pressures in front of and behind grouting curtain

Automatic water pressure measuring system from Geokon, Inc. has been installed

Fig.1

Section 15 - Overview of the Monitored Section of Standpipe Piezometers

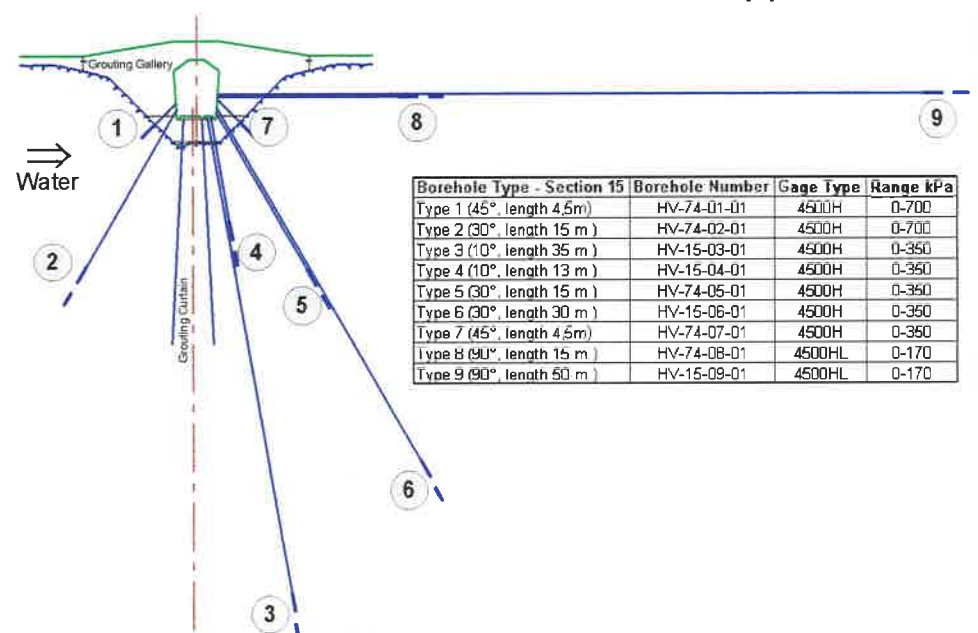
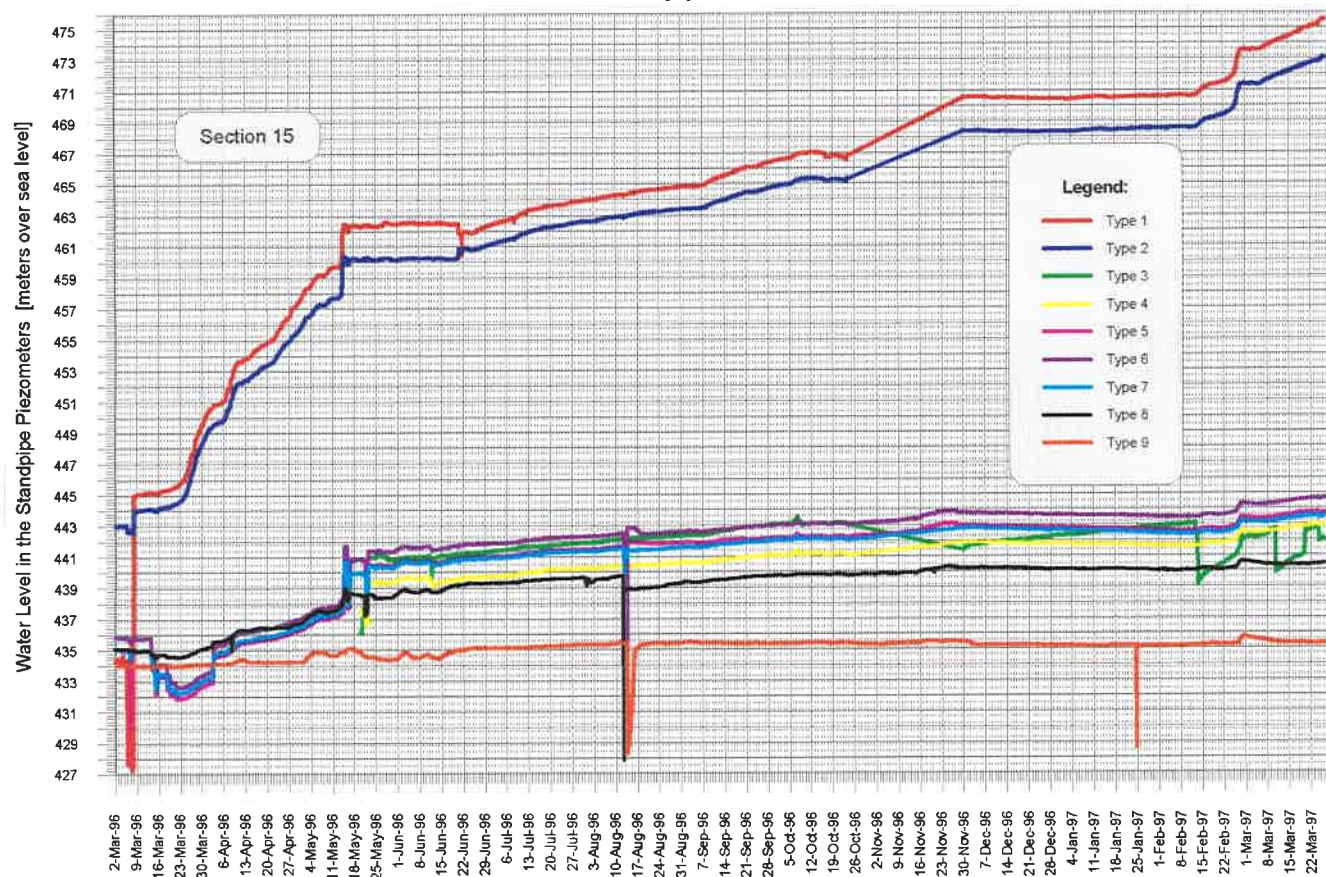


Fig.2

The Water Pressure - Time Relation in the Standpipe Piezometers in front of and behind Grouting Curtain



in the grouting gallery and in the surroundings of the dam body. The instrumentation has been done for monitoring leakage of the dam body and grouting curtain. An example of one measured section is in the Fig.1. Results of the automatic measurements from this section are in the Fig.2. Data from pressure transducers and piezometers are taken in the interval of 4 hours.

G4C has installed following Geokon's instruments in the Slezská Harta Dam.

### Grouting gallery

- 2 pcs. Micro-10 Datalogger
- 9 pcs. 16-Channel Multiplexer
- 1 pcs. 4580-1 VW Barometer, 17 kPa
- 17 pcs. 4500H VW Pressure Transducer, 700 kPa
- 44 pcs. 4500H VW Pressure Transducer, 350 kPa
- 25 pcs. 4500HL VW Pressure Transducer, 170 kPa
- 37 pcs. 4500S VW Piezometer, 350 kPa
- 8 pcs. 4500AL VW Piezometer, 170 kPa

### Surroundings of the dam body

- 26 pcs. 8001 LC-1 Datalogger
- 26 pcs. 4500ALV VW Piezometer - vented, 170 kPa