

## GEOPHYSICAL SURVEYS OF HYDROENGINEERING STRUCTURES AND PONDS.



The importance of geophysical surveys for ponds is growing in hard-to-reach places, rugged topography conditions and deep bogginess. The equipment is quite mobile and ensures surveys in hard conditions, makes it possible to obtain persistent information on the main elements of geologic structure and physical and mechanical environment properties.

Application of GPR methods makes it possible to project measures of pond bottom cleaning, disclose heterogeneous objects, project coastal zone. Within the framework of reconstruction programs of Moscow and Moscow region water bodies the specialists of GEOTECH have examined more than 30 water bodies.

### BASINS:

- Surveys in transition zones (examination of geological structure of ponds bottom from the water edge line up to 10 meter)
- Study of water-passes geological structure
- Determining depth (pond bottom 3-D model making)
- Determining thickness of silt deposits
- Locating littered zones of ponds
- Surveying underwater pipelines



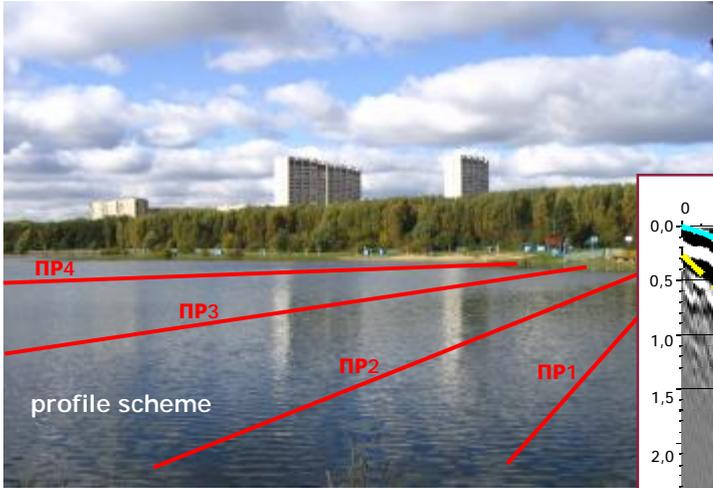
### HYDROENGINEERING STRUCTURES:

- Engineering geological surveys for hydroengineering structure construction
- Concrete structures survey
- Detecting filtration zones
- Study of engineering geological environment of zones adjacent to hydroengineering structures

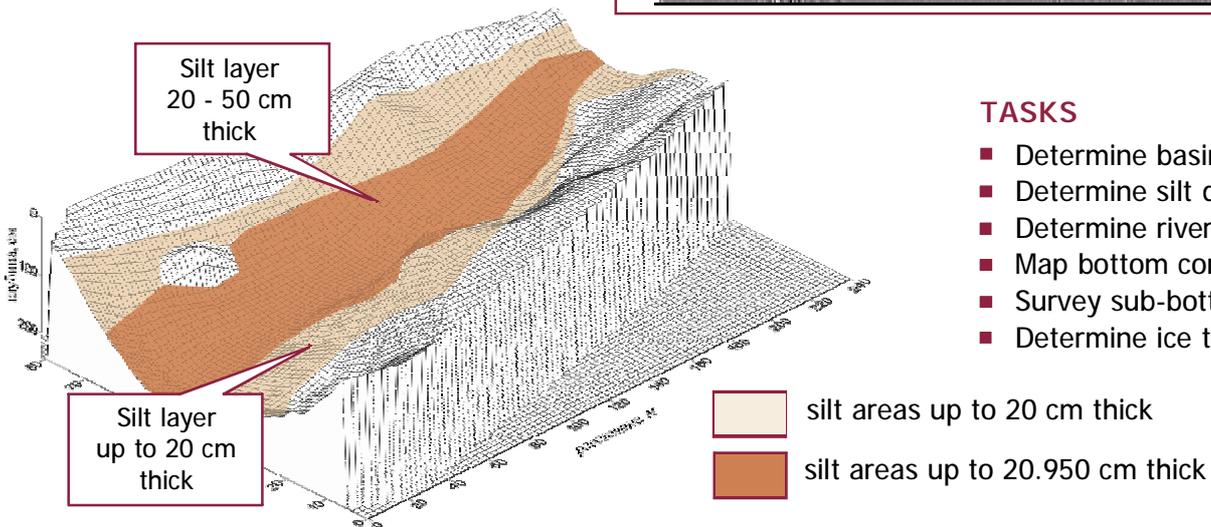
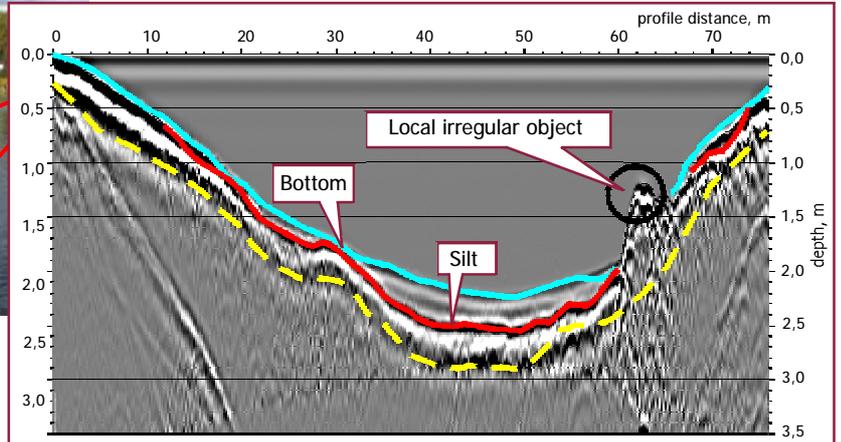
### THE FOLLOWING EQUIPMENT IS APPLIED:

- OKO-2 Ground Penetrating Radar
- Borehole GPR Complex
- Multichannel GPR complex
- IDS-1 Pile Testing Device
- DELTA-GEON-02 Seismic Signal Recorder
- LAKKOLIT-X-M2 Multichannel Seismic Station
- ERA-MAX Low Frequency Resistivity Instrument
- ERP-1 Electrical Instrument

## EXPLORATION OF MOSCOW BASINS



Radargram with interpretation results for one of the profiles



### TASKS

- Determine basin depth
- Determine silt deposit thickness
- Determine river depth
- Map bottom configuration
- Survey sub-bottom deposits
- Determine ice thickness

## EXPLORATION OF RIVER CROSSING FROM ICE

