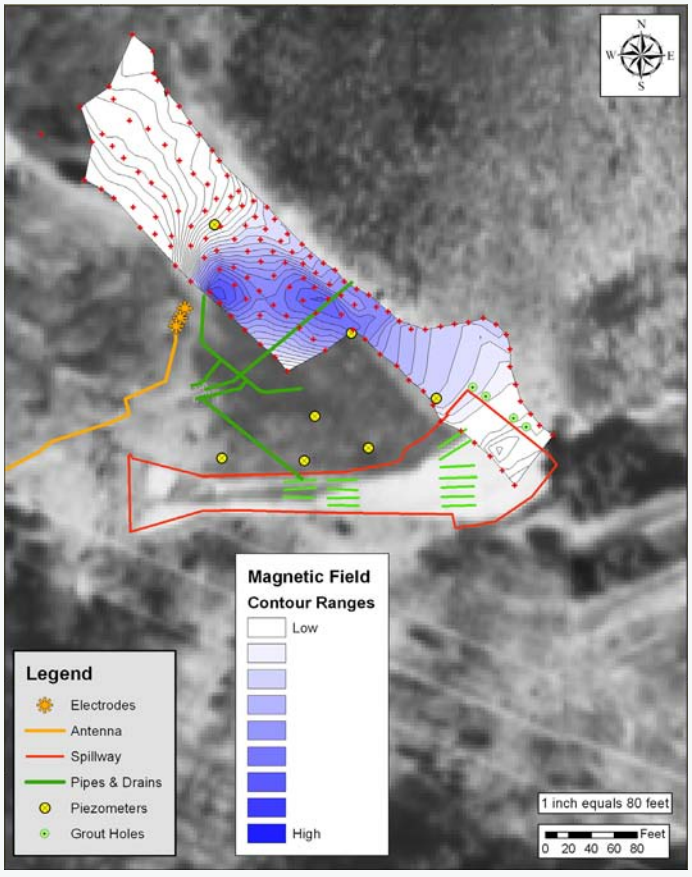
Q: ALTERNATIVES YOU CONSIDERED?

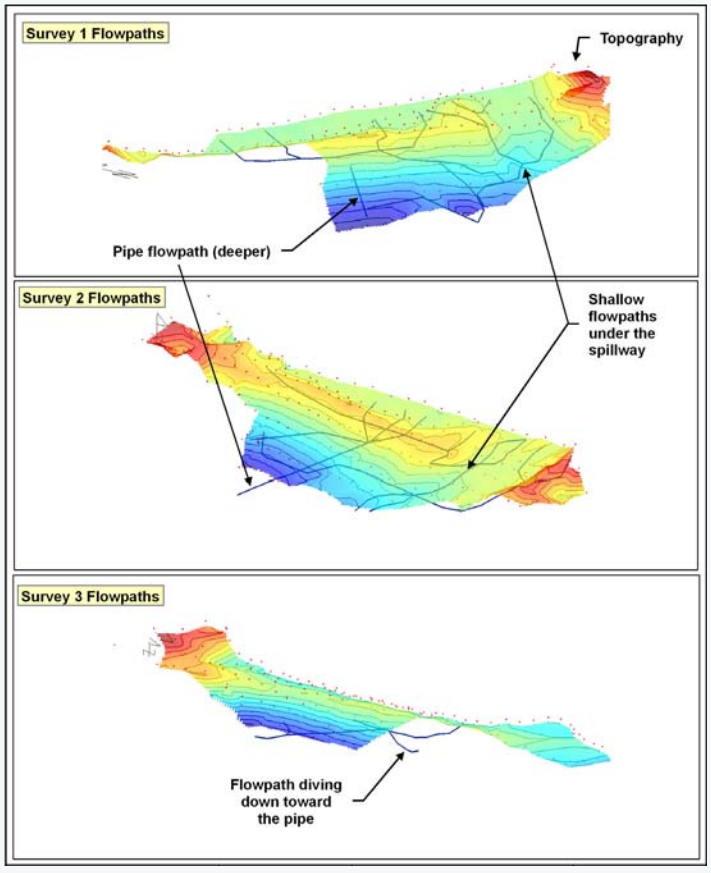
"WE DIDN'T HAVE ANY GOOD ALTERNATIVES FOR GETTING A focused map of preferential paths. Seismic follows soils more than water; unlike Willowstick it wasn't built for mapping groundwater directly. Resistivity might have worked but we had a concrete spillway—it wasn't uniform ground. Rebar would have got in the way. Resistivity induces an electric field from *above* the ground. The first thing it hits is the rebar. Resistivity is good if you are looking for underground tanks, buried things. It finds bedrock pinnacles and zones of deep saturated soil, *but* it also picks up rebar. I don't think it is optimal for clearly mapping seepage paths. Too many things can interfere with its signal since it doesn't light up the water directly."



PINPOINTING FLOW PATHS WITHIN ONE METER

Q: WHY DID YOU SELECT WILLOWSTICK?

"WILLOWSTICK CAN AND DID GIVE US A SPECIFIC GROUNDWATER map showing both vertical and horizontal location. We already knew roughly how deep it was. Our lake was only 5-10 feet below the top of the DAM. We were most interested in a plan view of where the seepage paths were. Willowstick energizes the groundwater directly so you get a clearer view without interference. It doesn't pick up clay etc."



MODELS SHOW WHERE TO REMEDIATE

Q: WAS IT SUCCESSFUL?

"YES. WILLOWSTICK GAVE US THE SPECIFIC TARGET AREA TO GROUT. The remediation work has shown that Willowstick was accurate. It matched up really well."

"Willowstick gave us the specific target area to grout. The remediation work has shown that Willowstick was accurate."

DON SIPHER, REGIONAL VP OF FROEHLING & ROBERTSON, INC