

CERBERUS

1985 - 1999

Control Experiment with Radiation for the
BELgian Repository for Underground Storage of
heat-emitting radioactive waste



GOAL

Demonstration of
combined effects of
radiation, heat, and
drilling on Boom Clay
properties (local hlw
near-field)

PHASE 1: 1987 – 1989

Design and installation of the
experimental set-up

PHASE 2: 1989 – 1994

Heating and irradiation
(simulation of HLW disposal)

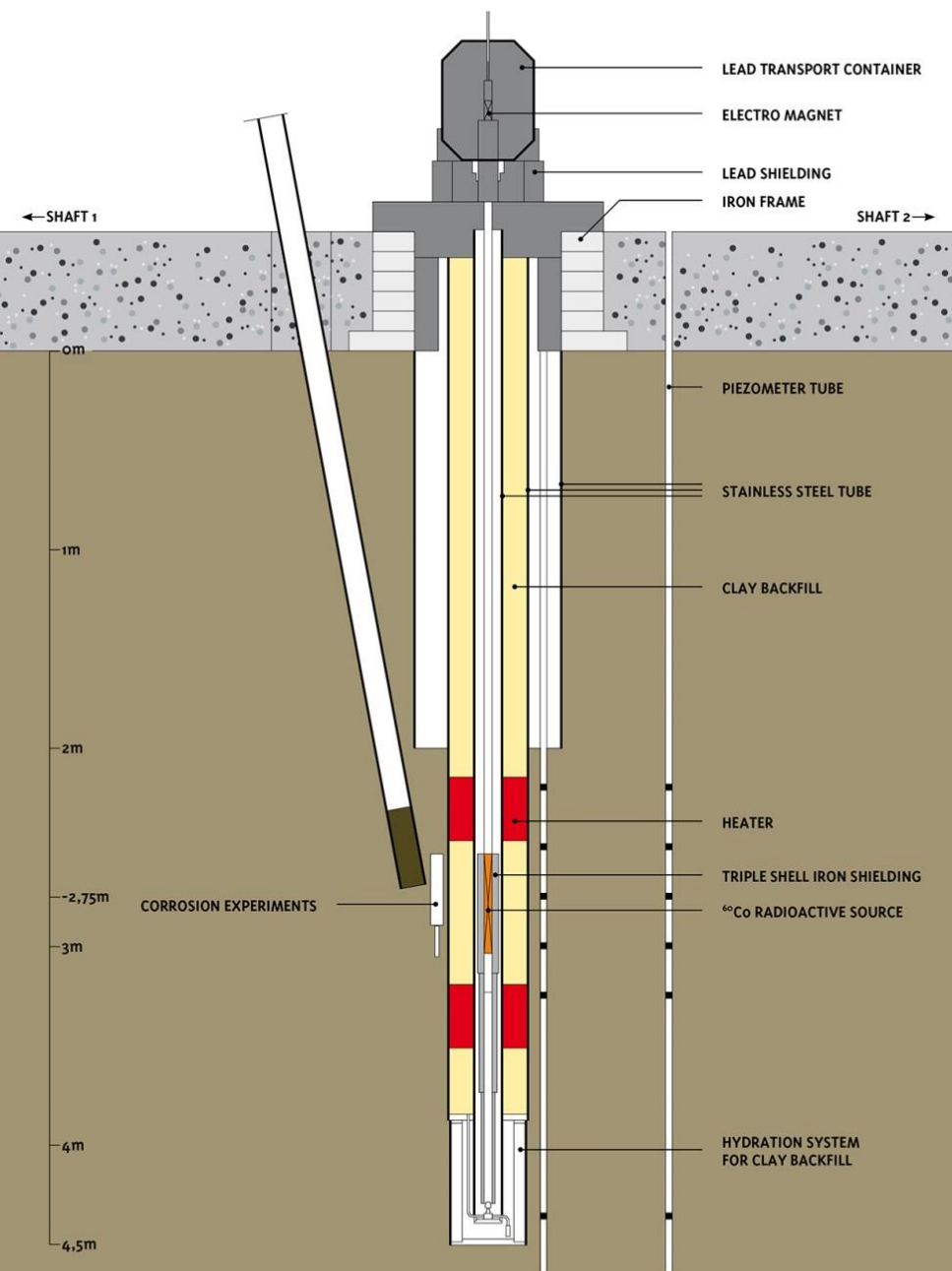
1989: installation of ^{60}Co -sources

1989-1994: heating (90 °C) and
gamma irradiation

1994: sampling of heated and
irradiated Boom Clay and Boom
Clay pore water

PHASE 3: 1995 - 1996

Study of the effect of heat
and radiation on the near field :
chemical, mineralogical and
mechanical analyses of heated
and irradiated clay



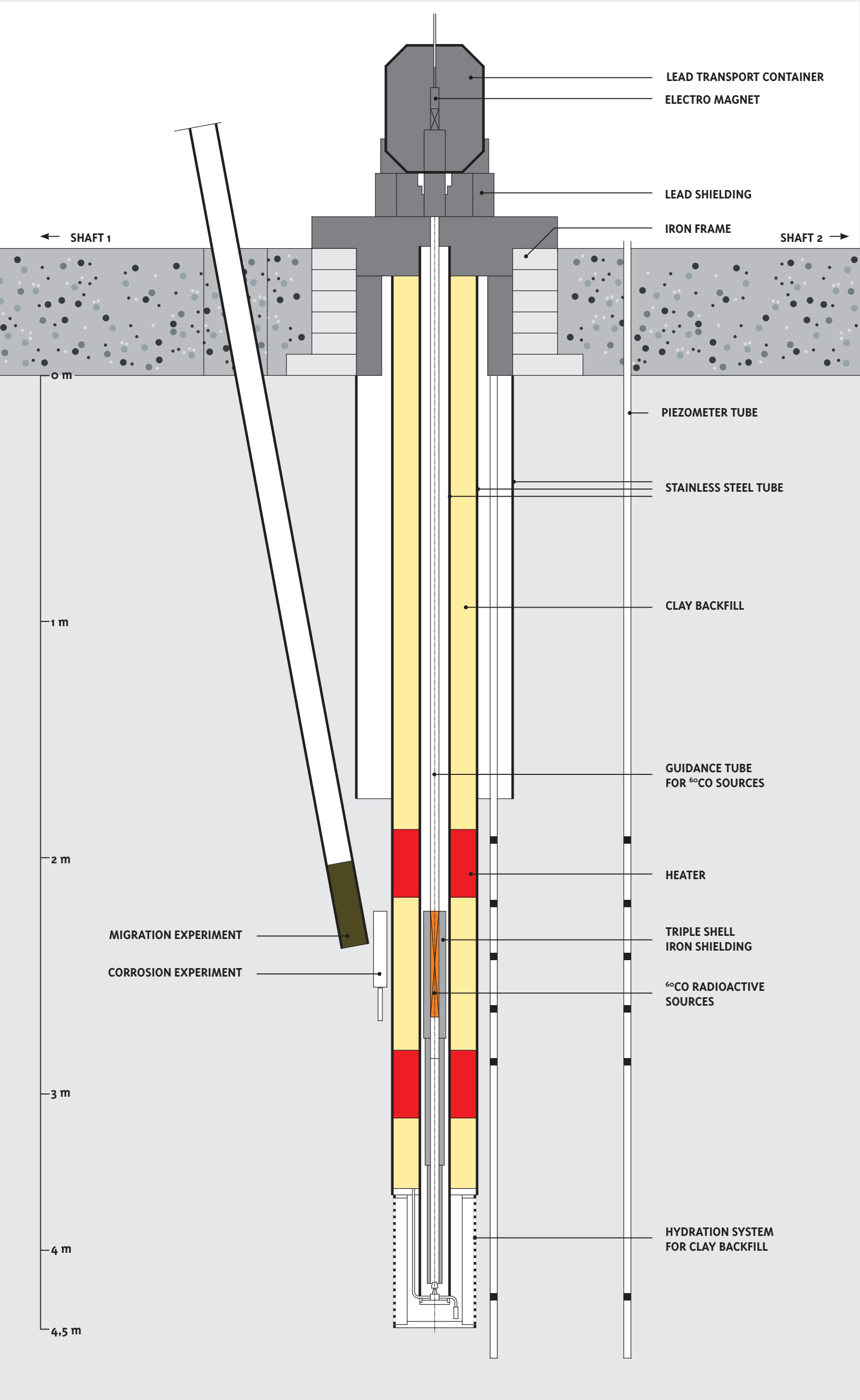
Experimental set-up



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During CERBERUS, a migration test using ^{241}Am and ^{99}Tc was performed and the behavior of backfill material, waste matrix, overpack and canister material were tested.

