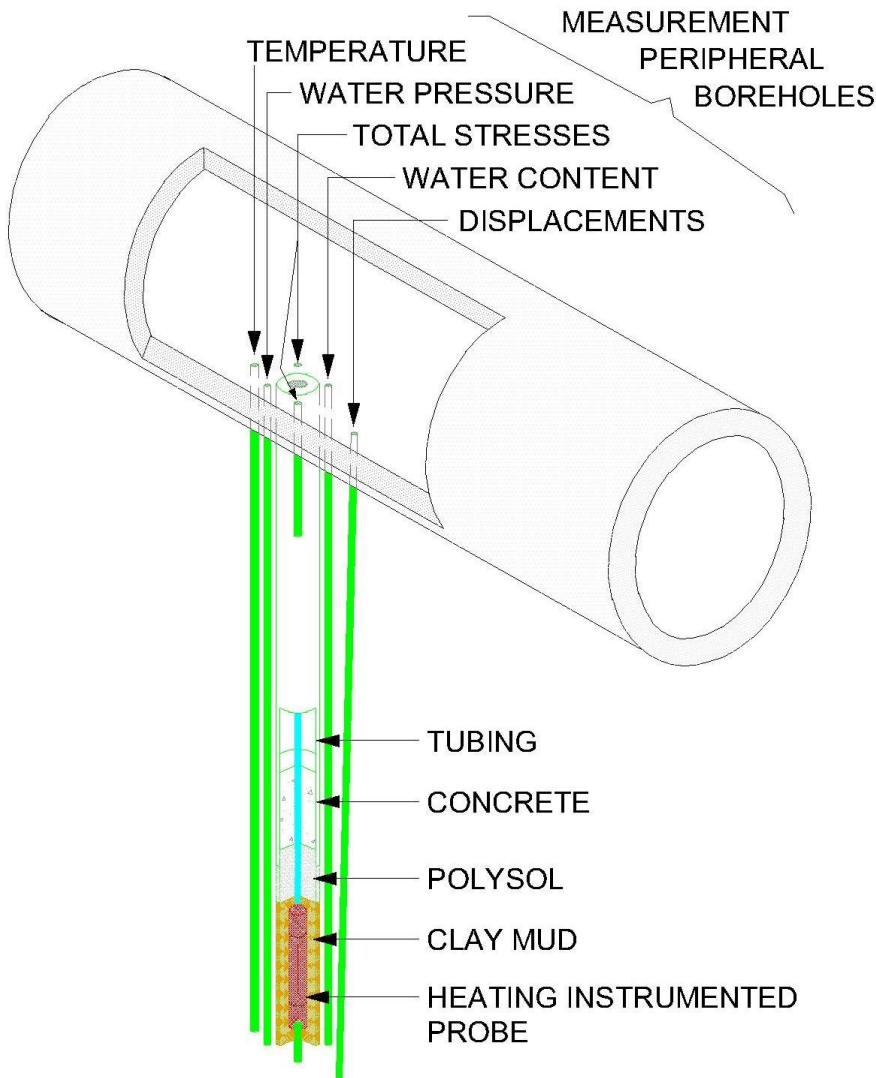


ChAracterization of Clay under Thermal Loading in Underground Storage



Experimental set-up

Two identical tests were set up: one installed in the ANDRA gallery and one in the test drift.

The central borehole with heater is surrounded by six instrumented boreholes to monitor the THM behaviour of the Boom Clay.

GOAL

STUDY THE THERMO-HYDRO-MECHANICAL BEHAVIOUR OF CLAY IN THE NEAR FIELD OF A HEATING SOURCE, SIMULATING THE THERMAL RELEASE OF 50 YEARS AGED COGEMA VITRIFIED HLW

December 1989 - May 1990

Installation instrumented boreholes; drilling central borehole and installation heater

September – November 1990

1st heating phase

March 1991 – January 1992

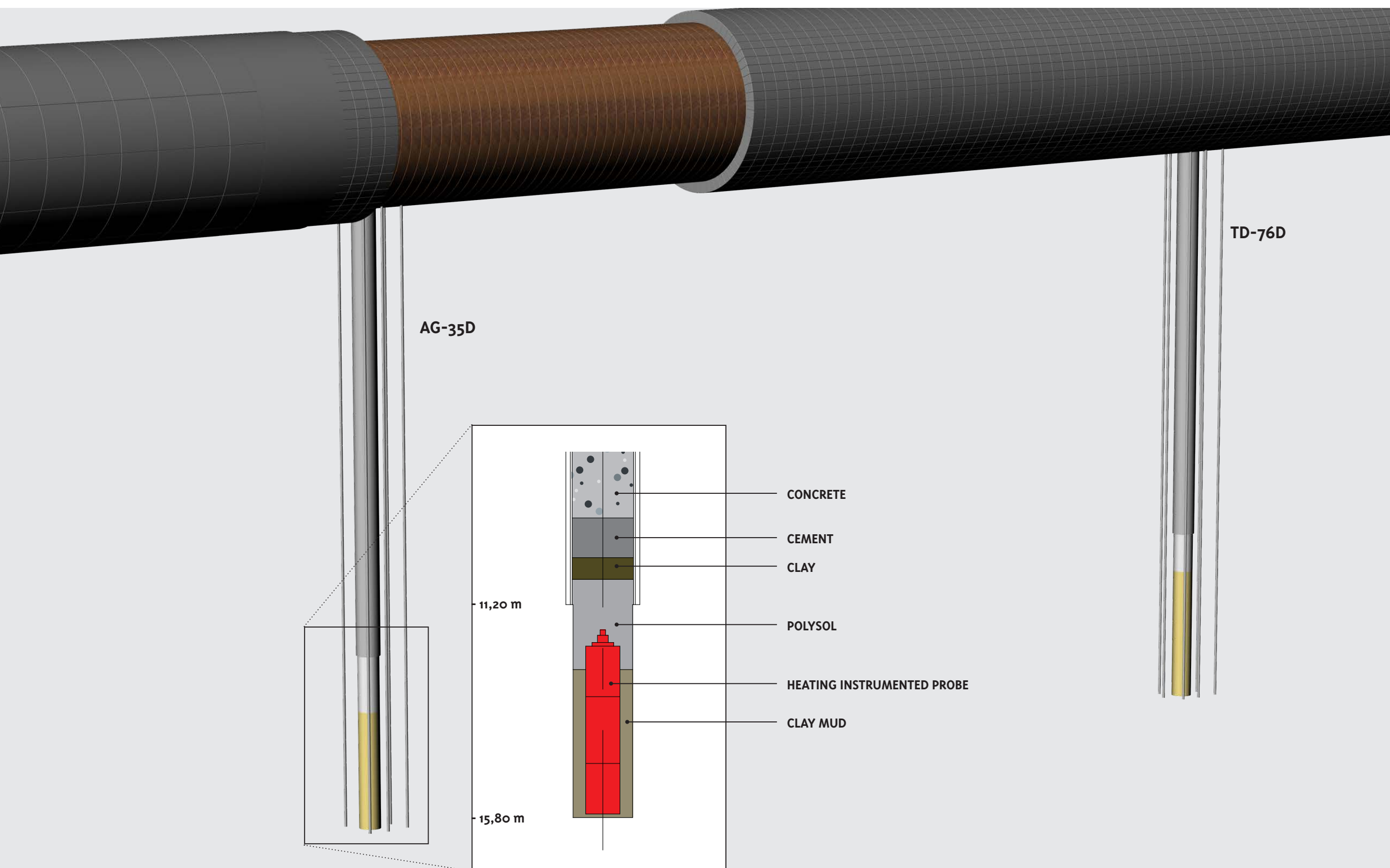
2nd heating phase



CACTUS I

1989 - 1993

ChAracterization of Clay under Thermal loading in Underground Storage



GOAL

Study of the thermo-hydro-mechanical behaviour of clay in the near field of a heating source, simulating the thermal release of 50 years aged COGEMA vitrified high level waste.

December 1989 - May 1990

Installation of the intstrumented boreholes
Drilling of the central borehole AG-35D
Installation of the heater

September - November 1990

1st heating phase

March 1991 - January 1992

2nd heating phase

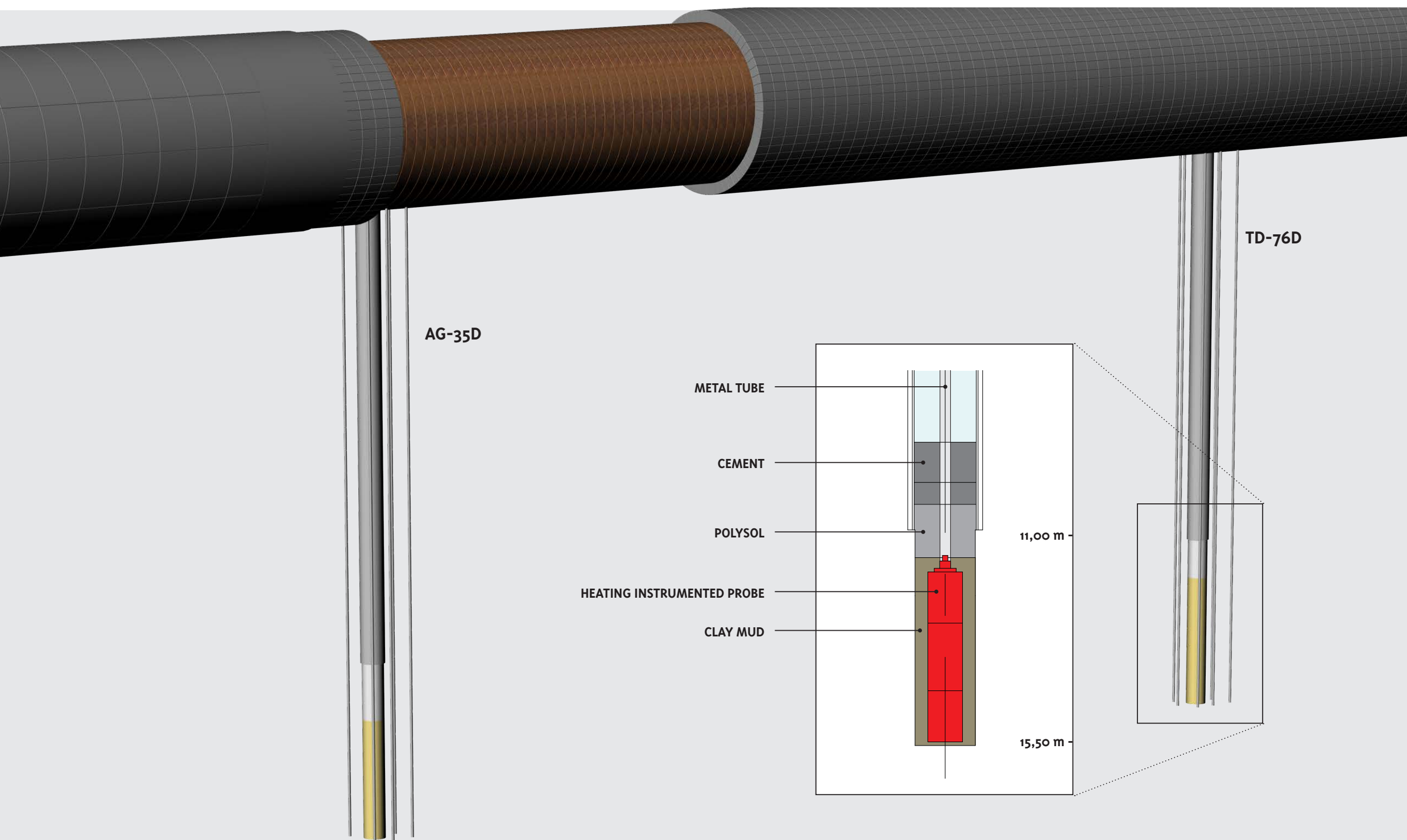
THE CENTRAL BOREHOLE WITH HEATER IS SURROUNDED BY SIX INSTRUMENTED BOREHOLES TO MONITOR THE THERMO-HYDRO-MECHANICAL BEHAVIOUR OF THE BOOM CLAY BY MEASURING TEMPERATURE, WATER PRESSURE, TOTAL STRESS, WATER CONTENT AND DISPLACEMENTS



CACTUS II

1990 - 1994

ChAracterization of Clay under Thermal loading in Underground Storage



GOAL

Study of the thermo-hydro-mechanical behaviour of clay in the near field of a heating source, simulating the thermal release of 50 years aged COGEMA vitrified high level waste.

February - July 1990

Installation of the instrumented boreholes

December 1991

Drilling of the central borehole TD-76D
Installation of the heater

February 1992 - March 1993

Heating phase

THE CENTRAL BOREHOLE WITH HEATER IS SURROUNDED BY SIX INSTRUMENTED BOREHOLES TO MONITOR THE THERMO-HYDRO-MECHANICAL BEHAVIOUR OF THE BOOM CLAY BY MEASURING TEMPERATURE, WATER PRESSURE, TOTAL STRESS, WATER CONTENT AND DISPLACEMENTS

