

2.3 GPK4

GPK4 is presently completed with a floating 9 5/8" casing string down to 4746 m depth (MD, off ground). **Before a down-hole pump can be installed the 9 5/8" casing will have to be cut-off and a 13 3/8" pump chamber has to be installed. This can only be done once all hydraulic stimulation work in GPK4 has been finalized as otherwise the hydraulic forces on the 9 5/8" casing will be too high (piston effect).**

GPK4 is the well in Soultz with the longest deviated hole section (ca. 2700 m, at inclinations $> 6^\circ$). It is also the well with the strongest inclination in Soultz ($> 34^\circ$). The floating casing is anchored in the granite with two high temperature CuNi packers and cemented from 4746 m (MD, off ground) up to approximately 4200 – 4000 m (MD, off ground) with high magnesium resistance (HMR) cement. On surface the floating 9 5/8" casing is sealed again with a dynamic high temperature and high-pressure pack-off.

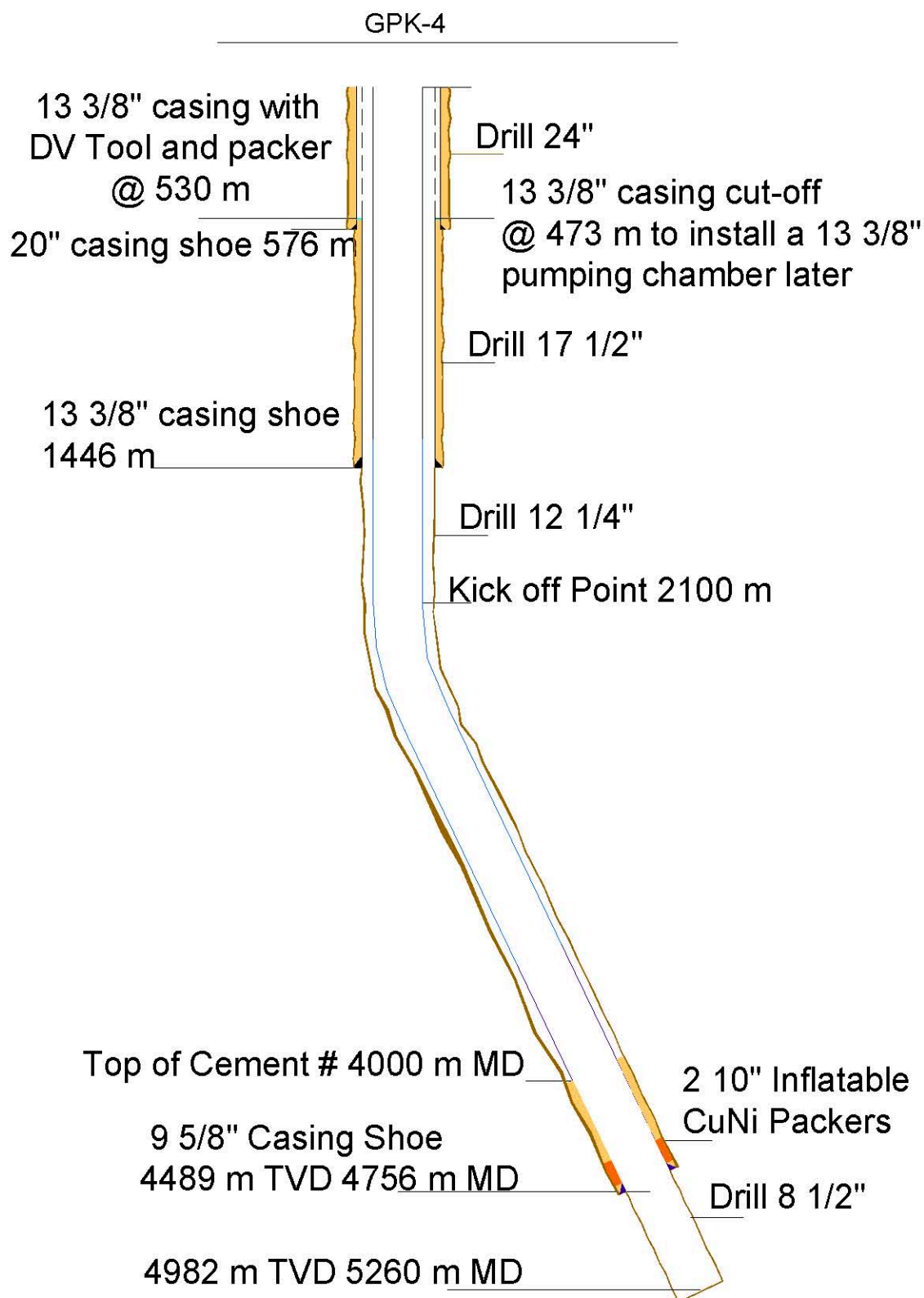


Figure 3: Completion of GPK4 in 2004 (all depths are off RKB / 9.7 m off ground)

4.4 GPK4 wellhead

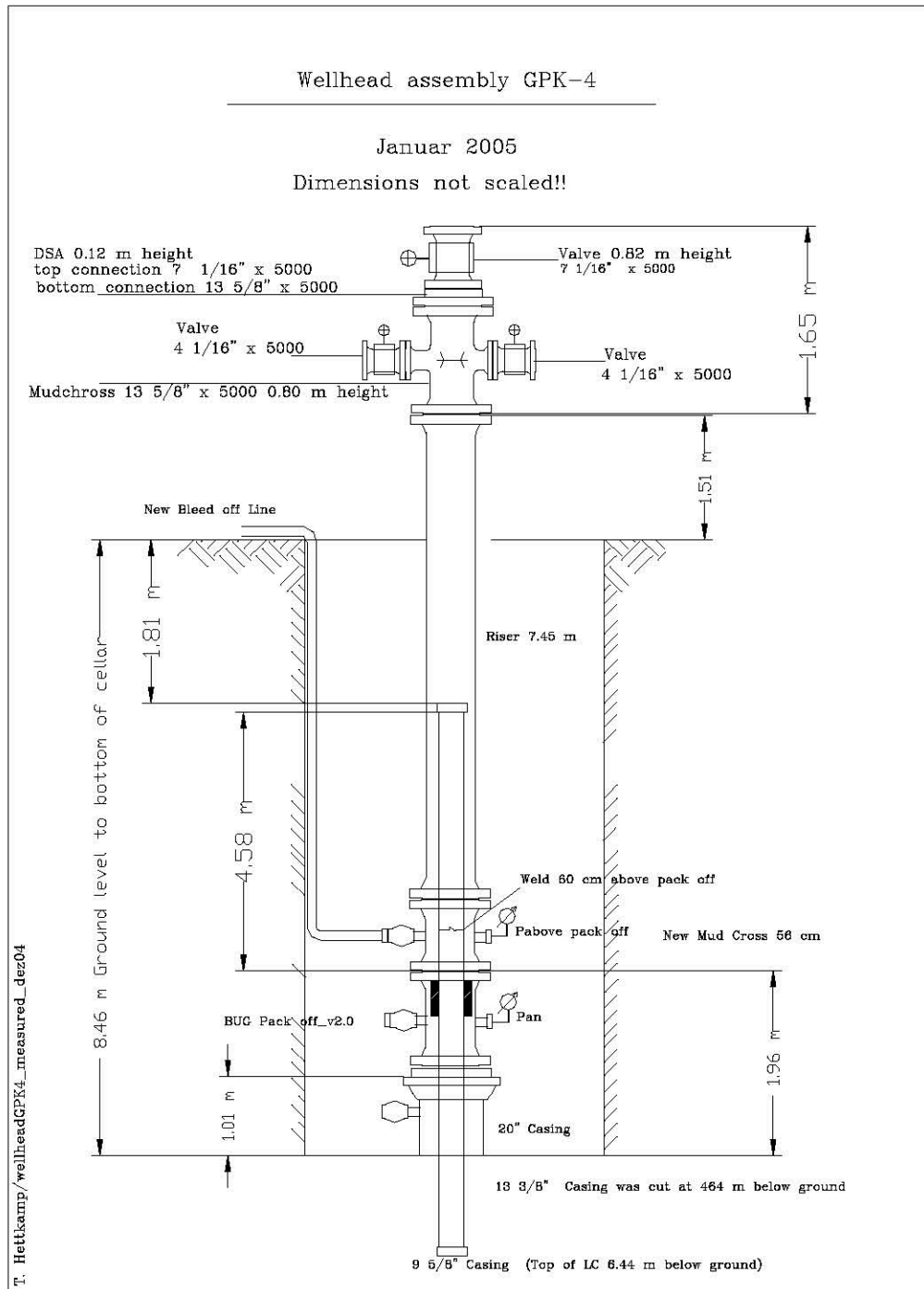


Figure 14: GPK4 wellhead assembly and 9 5/8" casing position in January 2005