

On placing and securing the conductor casing in hole no. 1, Kukon Hot Spring

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- The conductor casing should be **at least** 1,5 meters deep, **much preferably** closer to 3 meters.
- The surface should be excavated down to at least 1,5 meters or deeper, until the formation is hard enough to be drilled without a major risk of caving. The hole is not expected to be deeper than 3 meters. Otherwise, make the hole as deep as possible to excavate.
- The conductor casing should be wide enough so that it is possible to drill for the 9 5/8" (244 mm) casing. Use the minimum width of casing to make removal of cuttings easier when drilling for the 244mm surface casing
- Place the conductor casing in the excavated hole and cement around the bottom of the casing shoe with ordinary concrete mix (sand and cement) outside the casing, so that at least 30 cm of the casing is cemented. Make sure that the casing is absolutely vertical. If the hole is full of water, the cementing must be done through a pipe or tube, which extends to the bottom of the hole.
- Fill up the excavated hole around the conductor casing with excavated sand/gravel against the casing and compress the earth as possible without tilting the casing (see fig 1).
- The top of the conductor casing should stand at least 20 cm out of the ground and be equipped with a flange, so that it is possible to seal the annulus between the 9 5/8" (244 mm) surface casing and conductor casing later (see fig 2).
- Also a 3" (76 mm) horizontal pipe should extend from the top of the casing, as a side outlet, fitted with a valve, to divert the drillfluid and artesian water. This is also necessary to be able to cement under pressure, as well as to be able to seal of the artesian flow. Also a ½" (12,7 mm) pipe, with valve, to fit a pressure gauge (see fig. 2).

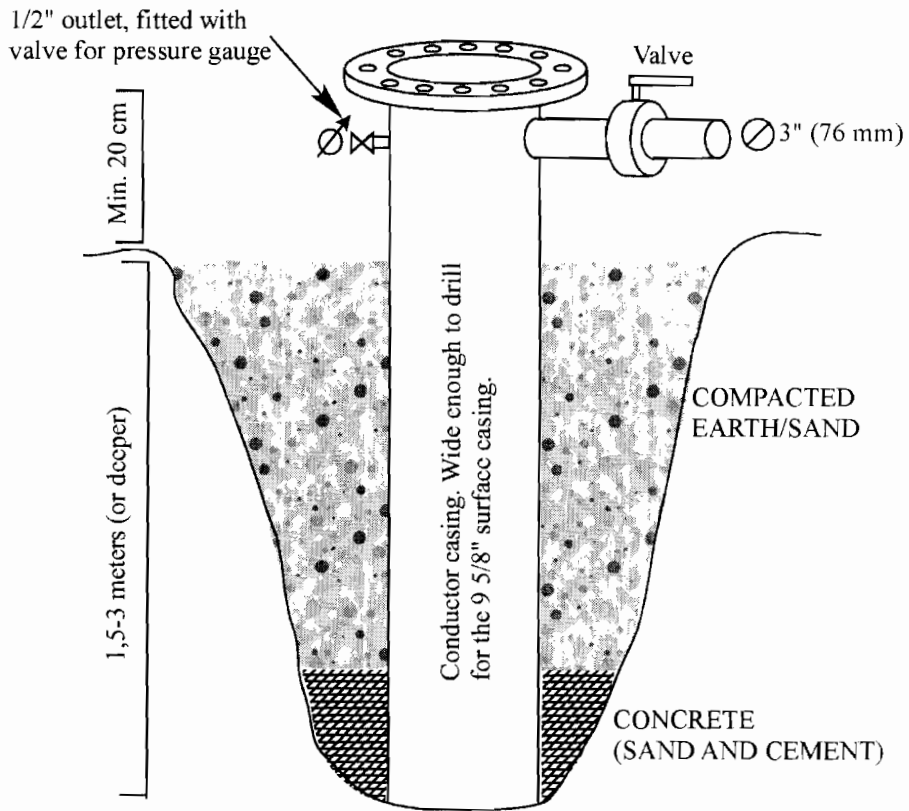


Figure 1. Placing and securing the conductor casing. Best to dig as deep as possible.

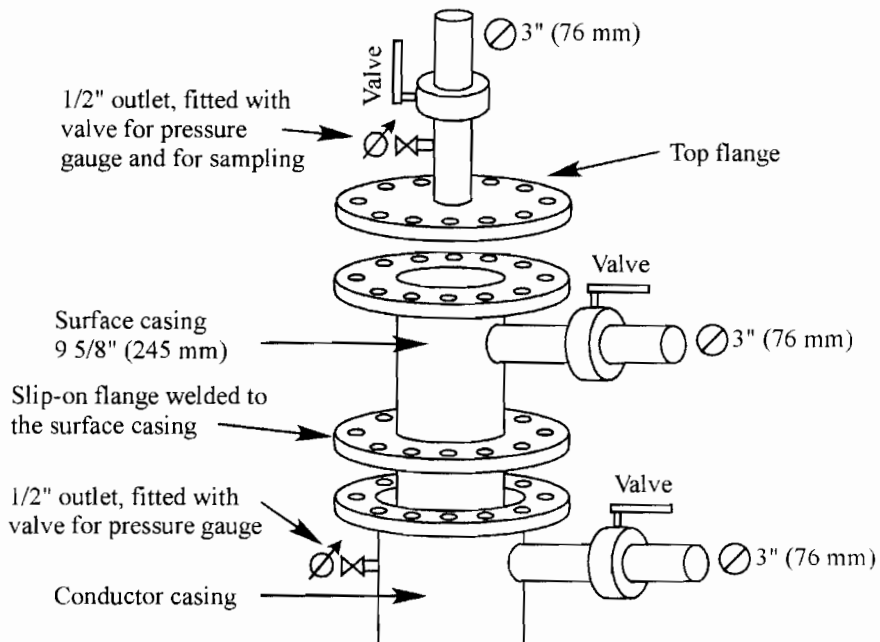


Figure 2. The wellhead. The production casing must have a flange to seal the annulus between it and conductor casing, both while drilling the hole, as well as cementing the production casing.