

Re: Hot Rock question from newbie

Source: <http://sci.tech--archive.net/Archive/sci.geo.geology/2006-12/msg00100.html>

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 - *Date:* Thu, 14 Dec 2006 22:33:31 GMT
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In article <5bwfh.15444\$HV6.12496@xxxxxxxxxxxxxxxxxxxxxxxx>, Clive Douglas wrote:

Roughly how long will it take to drill down to 6 miles in depth. Is a hole diameter of 300mm in the "normal" range???

6 miles = 36,000 ft.

Deepest that I've drilled was to a measured depth of 28,000ft (vertical depth was about 8,000 IIRC ... where'd I put that survey ... nope, got one for BD42S2, but that was a year or two later ... search, search, nope, too far in the past), which took about 4 months to get to that depth from a kick-off at 19,000-something. So getting to 36,000 would be expected to take in excess of a year.

The German KTB-1 and KTB-2 (Kontinental TiefBohrung, Continental Deep Bore) drilled to 9101m (29,850ft) over 5½ years between 1987 and 1994.

http://www.icdp-online.de/contenido/icdp/front_content.php?idcat=1180

The deepest hole ever drilled was the Kola Superdeep well which took 19 years to get to 40,200 ft. The ICDP site has posted more of their data since I last looked.

http://www.icdp-online.de/contenido/icdp/front_content.php?idcat=695 If you want more, you'll need better Russian than mine. Poccki yazik , konechno.

Hole diameters decrease as you go deeper, because you drill the well with a bit of one diameter, then have to line the hole with steel "casing" pipe of smaller outside and inside diameters, then drill ahead with another bit of yet smaller diameter. 4.5" (114mm) is the smallest diameter bit used regularly for making new hole ; it'll drill out from 5" casing [YES, I do know there are lots of considerations in selecting your grade and wall thickness of casing.]. 5" casing needs a 6" drill bit. 6" drill bits require 7" casing, which requires a 8½" drill bit. 8½" drill bits require 9.5/8" casing, which requires a 12¼" drill bit. 12¼" drill bits need 13.3/8" casing, which needs a 15½~17" dr