

Title (en)
Rotary drill bit

Title (de)
Drehbohrmeissel

Title (fr)
Trépan de forage rotatif

Publication
EP 1134355 A2 20010919 (EN)

Application
EP 01113872 A 19950929

Priority
• EP 95306936 A 19950929
• GB 9420839 A 19941015

Abstract (en)
A rotary drill bit comprises a bit body (10) having a shank (13) for connection to a drill string, a plurality of cutters (23) mounted on the bit body, each cutter having a cutting face (24, 25), and means for supplying drilling fluid to the surface of the bit body to cool and clean the cutters. At least some of the cutters (23) are lateral cutters located to act sideways on the formation being drilled, and the cutting faces (24, 25) of such lateral cutters are orientated to exhibit negative side rake and negative top rake with respect to the surface of the formation. The negative side rake angle is greater than 20 DEG and may be as much as 90 DEG , and the negative top rake angle is also more than 20 DEG . A single cutter (23) may include two cutting faces (24, 25) at different negative side rake angles, e.g. the cutter may comprise a generally cylindrical substrate (26) formed at one end with two oppositely inclined surfaces (24, 25) meeting along a ridge, a facing table of polycrystalline diamond being bonded to the substrate surfaces and extending over the ridge. <IMAGE>

IPC 1-7
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IPC 8 full level
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CPC (source: EP)
E21B 10/43 (2013.01); **E21B 10/5673** (2013.01)

Cited by
WO2008100455A1; GB2404889A; CN108222845A; US7225890B2; US8911624B2; WO2023005108A1

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