

Title (en)

Side port nozzle in a PDC bit

Title (de)

Düse mit seitlicher Öffnung für einen PDC Bohrkopf

Title (fr)

Buse a orifice transversal dans un trépan de forage PDC

Publication

EP 0959224 A3 20000712 (EN)

Application

EP 99303972 A 19990521

Priority

- US 8406698 A 19980522
- US 31114199 A 19990513

Abstract (en)

[origin: EP0959224A2] Using a nozzle having both a main passageway and a side passageway in a fixed head drill bit, especially a PDC bit, provides increased cooling and cleaning power, especially to the outer cutting surfaces. Additionally, causing a smaller side port passageway in a jet nozzle to intersect a larger main passageway in the nozzle in a manner that does not contain a chamfer or taper creates a non-plugging side port. The side port can then be sized down smaller than the size of the expected largest particle present in the mud without causing problems. <IMAGE>

IPC 1-7

E21B 10/60

IPC 8 full level

E21B 10/60 (2006.01); **E21B 10/61** (2006.01)

CPC (source: EP)

E21B 10/602 (2013.01); **E21B 10/61** (2013.01)

Citation (search report)

- [Y] US 4723612 A 19880209 - HICKS DUSTY F [US]
- [DY] US 5579855 A 19961203 - DICKEY WINTON B [US]
- [A] EP 0295045 A2 19881214 - REED TOOL CO [US]
- [A] WO 9731174 A1 19970828 - CCORE TECHNOLOGY & LICENSING L [US]

Cited by

CN116658083A; CN116717186A; US7481284B2; US11180959B2; WO2006081342A1; US10954722B2; US11377911B2

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