Title (en)

ANNULAR BARRIER AND DOWNHOLE SYSTEM FOR LOW PRESSURE ZONE

Title (de)

RINGFÖRMIGE SPERRE UND BOHRLOCHSYSTEM FÜR NIEDERDRUCKZONE

Title (fr)

BARRIÈRE ANNULAIRE ET SYSTÈME DE FOND DE TROU POUR ZONE DE BASSE PRESSION

Publication

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Application

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Priority

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Abstract (en)

The present invention relates to an annular barrier (1) for being expanded in an annulus (2) between a well tubular structure (3) and a wall (4) of the borehole (5) downhole for isolating a first zone (101) from a second zone (102) in the annulus between the well tubular structure and the wall of the borehole, the annulus having an annulus pressure, comprising: a tubular part (6) part of the well tubular structure (3), the tubular part comprising an opening (7) and an inside (8) having an inside pressure, an expandable sleeve (9) surrounding the tubular part and having an inner face (10) facing the tubular part and an outer face (11) facing the wall of the borehole, each end of the expandable sleeve being connected with the tubular part, an annular space (14) between the inner face of the expandable sleeve and the tubular part, the annular space having a space pressure, and a valve system (15) comprising a first valve (16) and a second valve (17), the second valve allowing pressurised fluid into the annular space to expand the expandable sleeve and prevent the fluid from flowing from the annular space to the inside of the tubular part, wherein the first valve has a first position allowing fluid communication between the inside of the tubular part and the second valve to expand the expandable sleeve, and a second position providing fluid communication between the annular space and the annulus and closing the fluid communication between the inside of the tubular part and the annular space by means of a pressure difference between the inside and the annular space independently of the annulus pressure. The invention also relates to a downhole system, and finally the present invention relates to a drilling method for drilling past a low pressure zone in a formation.

IPC 8 full level

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Citation (search report)

- [A] WO 2014154480 A1 20141002 - SALTEL IND [FR]
- [A] US 4653588 A 19870331 - WHITE L CAMERON [US]
- [A] US 4659530 A 19870421 - BOYERS CHARLES L [US], et al
- [A] US 3941190 A 19760302 - CONOVER GEORGE E
- [A] US 3908769 A 19750930 - SCHUYF WILLEM, et al

Cited by

WO2024079302A1; EP3628813A1; AU2019317982B2; EP4353945A1; US10947810B2; WO2020030577A1

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