

Title (en)  
METHOD FOR DOWNHOLE CYCLONE SEPARATION

Title (de)  
VERFAHREN ZUM ZYKLONEABSCHEIDEN IM BOHRLOCH

Title (fr)  
PROCEDE DE CYCLONAGE DE FOND DE Puits

Publication  
**EP 0830494 A1 19980325 (EN)**

Application  
**EP 95931870 A 19950927**

Priority  
• CA 9500549 W 19950927  
• US 47844095 A 19950607

Abstract (en)  
[origin: WO9641065A1] A method of downhole cyclone separation that is less prone to problems associated with gas breakout. This method include the following steps. Firstly, placing a cyclone separator (12) downhole in an oil well (14) producing a mixed stream of oil, water and gas. The cyclone separator (12) includes a separation chamber (16) wherein liquids of differing densities are separated, at least one mixed liquids inlet (18) through which liquids pass into the separation chamber (16), a first outlet (20) for liquids of a first density range to pass from the separation chamber (16), and a second outlet (22) for liquids of a second density range to pass from the separation chamber (16). Secondly, connecting the first outlet (20) to a recovery conduit (24) extending to surface. Thirdly, connecting the second outlet (22) to a disposal conduit (26) extending to a selected disposal site. The method being characterized by the further step of, fourthly, connecting the at least one mixed liquids inlet (18) to a pump (28) and pumping a mixed stream of oil, water and gas into the separation chamber (16) of the cyclone separator (12). The mixed stream is separated into a recovery stream of oil with a reduced water content which flows out of the first outlet (20) and along the recovery conduit (24) to the surface and a disposal stream of mainly water which flows out of the second outlet (22) and along the disposal conduit (26) to the selected disposal site.

IPC 1-7  
**E21B 43/38**

IPC 8 full level  
**E21B 43/38** (2006.01)

CPC (source: EP US)  
**E21B 43/385** (2013.01 - EP US)

Citation (search report)  
See references of WO 9641065A1

Cited by  
CN103821494A

Designated contracting state (EPC)  
AT BE DE DK ES FR GB GR IE IT NL

DOCDB simple family (publication)  
**WO 9641065 A1 19961219**; AT E191255 T1 20000415; AU 3515895 A 19961230; AU 712601 B2 19991111; DE 69516022 D1 20000504; DK 0830494 T3 20000904; EP 0830494 A1 19980325; EP 0830494 B1 20000329; NO 975724 D0 19971205; NO 975724 L 19980129

DOCDB simple family (application)  
**CA 9500549 W 19950927**; AT 95931870 T 19950927; AU 3515895 A 19950927; DE 69516022 T 19950927; DK 95931870 T 19950927; EP 95931870 A 19950927; NO 975724 A 19971205