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(11) **EP 0 984 134 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
31.01.2001 Bulletin 2001/05

(51) Int Cl.7: **E21B 43/38, E21B 43/12**

(43) Date of publication A2:
08.03.2000 Bulletin 2000/10

(21) Application number: **99306497.1**

(22) Date of filing: **17.08.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

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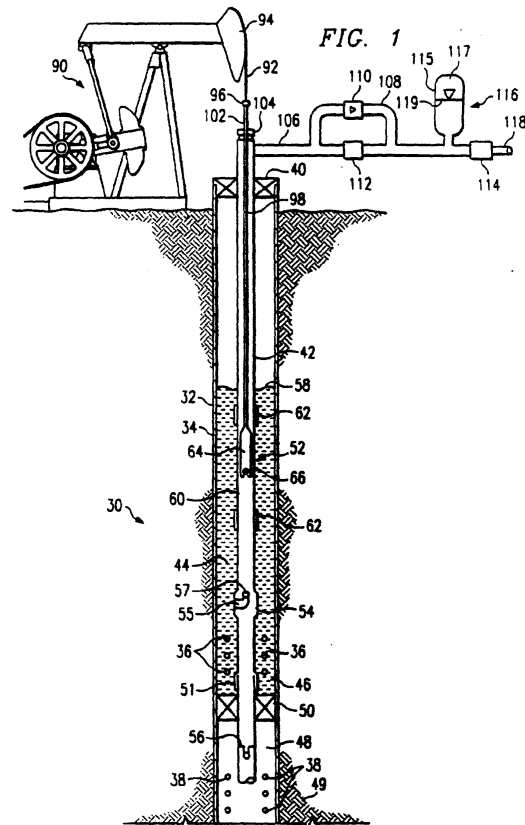
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(30) Priority: **18.08.1998 US 96923 P**
05.10.1998 US 103226 P

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(54) **Method and apparatus for down-hole oil/water separation during oilwell pumping operations**

(57) A method and apparatus for down-hole oil/water separation during oil well pumping operations includes a conventional sucker rod pump disposed within a tubing string (42) which may be disposed within the casing (34) of a wellbore (32). The sucker rod pump (52) may be releasably attached to a sucker rod (98) at one end. A side intake valve (54) may be disposed within the tubing string (42) at a position down-hole from the sucker rod pump (52). A check valve may be located at an elevation above the injection perforations. The sucker rod (52) may also be attached to a pumping jack at the surface of the wellbore (32). Production piping (106) with an automatic control valve (112) and a back pressure regulator (114) may extend from the tubing string (42) at the surface of the wellbore (32). A piping loop (108) with a check valve (110) disposed therein may also extend from the production piping (106) terminating on opposite sides of the automatic control valve (112). An accumulator (116) may be coupled to the production piping (106) between the back pressure regulator (114) and the piping loop (108).



EP 0 984 134 A3



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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 6497

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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			E21B
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 6 December 2000	Examiner Bellingacci, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03 92 (P44C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82