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(54) Title: SYNCHRONOUS CONTINUOUS CIRCULATION SUBASSEMBLY WITH FEEDBACK

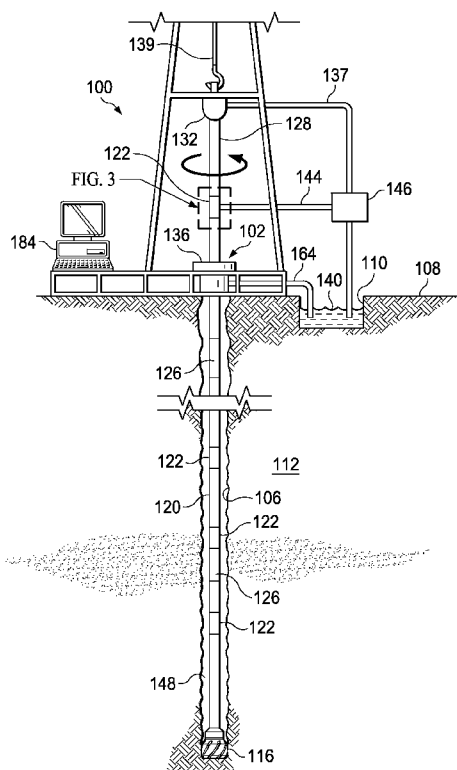


FIG. 1

(57) Abstract: A system for continuously circulating fluid in a wellbore includes a control system comprising a memory, a power source, and a user interface, along with a drill string subassembly having an inlet and an outlet, and defining a flow path from the inlet to the outlet. The conduit includes a lateral port to the flow path between the inlet and the outlet. The drill string subassembly also as a first valve that controls flow to the flow path from the lateral port and a second valve that controls flow to the flow path from the inlet. The drill string subassembly may also include a sensor that generates a fluid coupling signal responsive to a coupling between the lateral port and secondary fluid supply source, and includes a synchronous actuation member configured open the first valve and close the second valve in response to, for example, the fluid coupling signal.

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