Abstract

TITLE OF INVENTION: MAGNETICALLY COUPLED SUBSURFACE SAFETY VALVE

Provided is a retrievable safety valve insert. The retrievable safety valve insert, in one aspect, includes an outer housing having a central bore, and a valve closure mechanism coupled to the outer housing proximate a downhole end of the central bore. The retrievable safety valve insert, in accordance with this aspect, further includes a bore flow management actuator disposed in the central bore, the bore flow management actuator configured to slide to move the valve closure mechanism between a closed state and an open state, and one or more safety valve insert magnets coupled to the bore flow management actuator, the one or more safety valve insert magnets configured to magnetically couple with one or more landing nipple magnets of a safety valve landing nipple to slide the bore flow management actuator and move the valve closure mechanism between the closed state and the open state.

[Fig. 4E]