

FLOW DIVIDER BOX FOR CONDUCTING DRILLING MUD TO
SELECTED DRILLING MUD SEPARATION UNITS

ABSTRACT OF THE DISCLOSURE

A flow divider box disposed beneath a continuous-loop scalper screen mud separation unit that is driven in a continuous loop conveying and discharging large amounts of drill solids at the end of the separation units end overboard or into a reserve pit. The flow divider box has a box-like housing with an array of openings to redistribute or separate the fluid flow stream, drilling fluid, or drilling mud, in the flow path of the separation unit and selectively supply drilling fluid or drilling mud to a sundry of shale shakers in the process of separating the sediments obtained from a well bore. The flow divider box has a series of collection divider boxes disposed below the separator unit that separate and redistribute drilling fluid or drilling mud, upstream of the conventional solids control equipment of the mud system of a drilling rig. The individual collector boxes are rectangular, baffled, and have adjustable gates parallel to the flow divider box, capable of 2' head capacity. This results in an increased hydrostatic head, which enables high flow rates to be easily processed. The adjustable gates collectively meter the flow rate to the shale shakers or other conventional downstream solids control equipment of the mud system. Thus, one flow divider box services a sundry of shale shakers, etc., while controlling the flow rate at each individual shale shaker. The series of opened or closed gates, or positioned at various increments therebetween, provides the option of running one or multi shale shakers at one time, to compliment the drilling operations, with respect to changes in the lithology, geological formations, or loss of returns in relation to the gallons pumped or volume of drilling fluid or drilling mud entering the flow divider box.

Figure 1