

8.4.2 Unplanned influx incidents should be categorized and reported in accordance with local operator policy, and consistent with regulatory body requirements. An influx into the wellbore below the planned limit is not considered a well control event.

8.4.3 A decision-making guidance tool should be utilized to graphically illustrate and communicate to the MPD crews when and what action is required. See Table 1 for an example of such a tool.

Table 1—Example Managed Pressure Drilling Operations Matrix

MD Operations Matrix		Surface Pressure			
		At Planned Drilling Back-pressure	At Planned Connection Back-pressure	> Planned Back-pressure and < Back-pressure Limit	≥ Back-pressure Limit
Influx	No Influx	Continue drilling	Continue operation	Continue operation; adjust system to decrease WHP	Secure well; evaluate next planned action
	≤ Operating limit	Continue drilling; adjust system to increase BHP	Continue drilling; adjust system to increase BHP	Continue drilling; adjust system to decrease WHP and increase BHP	Secure well; evaluate next planned action
	< Planned limit	Cease drilling; adjust system to increase BHP	Adjust system to increase BHP	Secure well; evaluate next planned action	Secure well; evaluate next planned action
	≥ Planned limit	Secure well; evaluate next planned action	Secure well; evaluate next planned action	Secure well; evaluate next planned action	Secure well; evaluate next planned action
<p>Definitions</p> <p>Back-pressure limit: the maximum allowable surface pressure. It can be limited by casing design, surface equipment limitations, formation break-down pressure, etc.</p> <p>Operating limit: the limit at and below which drilling can continue.</p> <p>Planned limit: the limit at and above which MPD ceases and a transition to well control operations is required.</p>					

The MPD operations matrix should be project-specific and based on the design limitations of the actual equipment that will be used during project execution, and any formation related constraints. A risk-based approach based on, but not limited to the following is recommended:

- a) surface equipment;
- b) size of drilling window;
- c) productivity;
- d) high-pressure, high-temperature;
- e) drilling fluid type;
- f) health, safety, and environment.

The procedure for transitioning well operations between well control and MPD mode should be based upon pre-well engineering and planning.