Emerson’s TESCOM™ block valves stand up to oil sands’ high temperatures and chlorides

RESULTS
• Created unique custom double block-and-bleed solution with compact design
• Withstood high temperatures and harsh environment
• Reduced weight, height, and structural requirements
• Reduced installation and field-testing time

APPLICATION
Drilling and production platforms

CHALLENGE
An oil sands project operator recycled steam into the reservoir formation to help flow oil to the collector wells. The recycled steam increased the chloride content of the process. Additionally, the heat from the steam was damaging some of the metals in the process equipment. The project operator was searching for a compact, double block-and-bleed instrument/piping interface for the well pads. The solution had to provide safe and easy installation, removal, and calibration of the instruments mounted directly on the process piping. A large-bore (3/8-inch) roddable flow path was desired to help eliminate plugging. The operator also wanted the equipment to withstand 1000°F process temperatures. Since the wells were located at a remote site, the components had to operate reliably and have long service lives.

SOLUTION
Emerson was the only supplier that built a 3/8-inch roddable, metal-seated valve that could withstand 1000°F temperatures, resist chlorides, and meet ASME B16.34 piping class specifications. The unique custom solution placed multiple valves into a single valve body for a compact design that reduced weight, height, and structural support requirements. The centerpiece of the solution was a highly reliable TESCOM Anderson Greenwood H70DB primary root valve that provided redundant block valve capabilities in severe or hazardous process conditions. The valve’s modular body greatly reduced installation and field-testing time compared with conventional designs that incorporated multiple valves and fittings.