

SPARTANPRO™ OIL SANDS SAGD SOLUTIONS

For more than 10 years, Spartan Controls' Process Solutions group has been helping oil sands customers improve their processes through the application of advanced process control (APC). By stabilizing and continuously optimizing the most challenging and complex processes in the industry, APC achieves proven operational benefits that include:

- *Increased Production*
- *Reduced Steam-to-Oil Ratios*
- *Increased Process & Well Stability*
- *Improved Consistency of Operation*
- *Increased Energy Efficiency*
- *Reduced Cost of Operation*
- *Reduced Risk of Trips & Failures*
- *Reduced Upsets to Downstream Processes*

Over the past five years, Oil Sands producers have been continuously challenged to produce more with less. On top of the purely economic pressures, goals related to emissions and sustainability have added increased scrutiny to an industry already under pressure. From an operations perspective, meeting the shifting targets is not trivial. Reservoir conditions are difficult to monitor and can change abruptly; solid and slurry streams can be challenging to measure, let alone control; and critical equipment is easily damaged. The lack of insight into the process often leads to over-cautious operation, significant losses in recovery, and an under-use of automation.

*The SpartanPRO™ library of oil sands processing solutions have been developed and tested in these live, harsh environments to effectively automate complex SAGD operations and deliver real financial improvements. Customers using our solutions have realized net, measured benefits including **production increases of up to 10% and steam-to-oil ratio (and GHG) reductions of up to 6%**.*

*Our library of solutions is designed to integrate seamlessly with existing operational philosophies, graphics and control strategies using either a fully integrated DeltaV DCS solution leveraging the DeltaV APC suite, or a high-powered AspenTech™ platform for non-DeltaV systems. With **typical payback periods of 1-12 months**, these solutions tackle some of the biggest challenges on site today to bring your operation to the next level.*



SPARTANPRO™ OIL SANDS SAGD SOLUTIONS

SpartanPRO™ OTSG
SpartanPRO™ HRSG
SpartanPRO™ Boiler

Improve steam generation efficiency by up to 2.5% and reduce greenhouse gas (GHG) emissions across all unit types. Solution components include fuel train management, feedwater load allocation, drum level control, combustion efficiency control, and steam quality optimization.

SpartanPRO™ Steam Injection

Decrease site-wide SOR by up to 5% and increase net production by up to 8% by optimizing the allocation of available steam to the most efficient wells first, ramping up steam generation efficiently, and running your boilers flat-out.

SpartanPRO™ Steam Header

Stabilize steam supply pressure and prevent boiler trips through effective coordination of steam generators, transfer lines, vents, and steam sinks.

SpartanPRO™ Well Production

Increase production by up to 10% by stabilizing subcool along the length of the well. Decreases steam-to-oil ratio, reduces equipment wear, reduces steam breakthrough events, and stabilizes formation.

SpartanPRO™ Separation

Increase product recovery and improve water separation with effective control and coordination of separation units based on production rate.

SpartanPRO™ Flotation

Improve flotation cell recovery by stabilizing froth levels and pull rates based on current production and inlet quality.

SpartanPRO™ Evaporators

Reduce overall cost of evaporation and increase throughput capacity by up to 5% by balancing and controlling heating duty across the evaporator set.

SpartanPRO™ Blending

Reduce diluent costs and increase pipeline transfer capacity by up to 10% with precise dual-viscosity measurement and control using our industry-customized, fully-equipped blending skid.

For further information, contact your local Spartan office.

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