

DSI Completes First Geothermal PBL® Application in Asia Pacific, Delivering Time & Risk Reduction



Challenge

A major geothermal operator in New Zealand required intervention on a depleted well in Rotorua. The operation involved removing an obstruction at 2,500m, replacing a worn 7-in. shield liner, and cleaning five feed zones. This was originally planned as two separate runs, which would have increased time, cost, and operational risk.

Solution

DSI's global technical team collaborated with the operator to redesign the plan using a 4 ¾-in. PBL® tool, configured with dual 18/32-in. nozzles, enabling milling and jet washing in a single run.

Execution

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- Milling performed at 300 GPM
- PBL® system activated and verified via pressure response
- Flow rate increased to 450 GPM for jet cleaning
- Five feed zones washed from 2,425 to 1,500m
- Tool deactivated and pulled to surface in excellent condition, no nozzle wear observed

Results & Benefits

The deployment of the 4 ¾-in. PBL® Split Flow Bypass Tool proved highly effective in this geothermal intervention, delivering both operational and economic advantages.

Key Achievements:

- Eliminated an entire trip: By combining milling and high-rate jet washing into a single BHA the Operator avoided a second run, saving both time and cost.
- Reduced safety exposure: Fewer trips meant less handling of tools and tubulars, lowering the risk of operational incidents and improving onsite HSE performance.
- Maintained tool integrity at high flow rates: The PBL® tool and its nozzles withstood flows up to 450 GPM without erosion or wear, confirming durability in harsh, abrasive geothermal environments.
- Enabled efficient debris removal & feed zone cleaning: Split Flow activation allowed targeted jetting across five feed zones, improving wellbore condition and restoring production pathway.
- Demonstrated geothermal readiness for future wells: This successful operation proves the PBL® system is not only suitable for oil & gas but highly capable in high-temperature, high-flow geothermal applications.

With this milestone, DSI advances its presence in geothermal drilling applications, offering operators a reliable, field-proven tool for circulation, hole cleaning, and multi-function intervention workflows.

