

# CASE HISTORY

## High Temperature Downhole Sampler

### APPLICATION

Fluid Sampling

### TECHNOLOGY

Vulcan Flow Through Sampler (FTS)

### LOCATION

Philippines  
(Geothermal)

### CUSTOMER CHALLENGE

The customer is a relatively new geothermal operator in the Asia-Pacific region and encountered operational problems such as CO<sub>2</sub>, unknown fluid composition of high acidity and temperatures of over 300 C (572 F). Because of these challenges, plans for building their own power generation plant were put on hold indefinitely.

In order to better understand the downhole conditions and production potential, the customer needed to acquire downhole data using memory technology capable of withstanding the harsh conditions. SDI was challenged to deliver the requirements of the customer.

### SCIENTIFIC SOLUTION

SDI offered its world leading Vulcan Flow Logging System (FLS), Vulcan MFT-60 Caliper and Vulcan Flow Through Sampler (FTS).

The Vulcan FTS runs were planned using the Vulcan FLS data such as temperature and spinner flow results. The downhole operation of the sampler is controlled by a timer. The sample chamber is lowered into the well with open valves on each end, allowing well fluids to pass freely through the chamber. At an interval programmed on the surface, the valves close, trapping the fluid. The sampler can then be removed from the well, with the fluid trapped from known depths.

Three high temperature wells of the customer were sampled successfully, allowing customer to analyze fluids that were being produced downhole.

### CLIENT VALUE

After consistent Vulcan FLS, Vulcan MFT-60 and Vulcan FTS Surveys, the client decided to implement a Fluid Management System (FMS) in order to make their wells fit for power generation. The FMS proved to be a successful initiative and they are now in their final stages of planning the construction of their first power generation plant.

