



Collecting MCS soil samples between two active fuel storage tanks at Cape Newenham Air Force Station Long Range Radar Site (LRRS) in southwest Alaska.

54LT: The Little Rig That Could

Discovery Drilling in Anchorage, AK, purchased a new Geoprobe® 54LT in July of last year. After testing it out in their backyard to better understand the machine's capabilities, they packed it up for mobilization to Cape Newenham and Indian Mountain – two US Air Force Stations operated by the Alaska Air Command in the remote Alaskan wilderness. The two locations were part of an ongoing Compliance Site Investigation where Discovery Drilling, working with CH2M HILL, provided soil and groundwater sampling at Long Range Radar Sites scattered all over Alaska.

As with many of the remote locations in Alaska, Cape Newenham and Indian Mountain have no road access. The only option to mobilize equipment and supplies is to fly in the drill rig and tooling. "We selected the 54LT for Cape Newenham and Indian Mountain based on logistical constraints and the scope of work," said DJ Wardwell, Assistant Operations Manager for Discovery Drilling. "We were able to fly it in and out of both sites with smaller cargo aircraft than would be required for a larger rig, which substantially decreased our mobilization costs. We drilled many of the 10-foot borings in a fast and efficient manner, and the 54LT was able to access locations that a larger rig would have no way of getting to," he added.

Soil sampling was completed using the Geoprobe® MC5 Soil Sampling System collecting 4-foot samples. When groundwater was encountered, Mill Slotted 2.25-in. rods were driven to the required depth and water was collected with a peristaltic pump.

Although the boreholes were relatively shallow, the geological conditions were challenging none-the-less. "I admit to being skeptical of the 54LT's abilities upon first seeing it," DJ recalls. "You most always sacrifice power when using a smaller-sized rig. But the samples speak for themselves. I was really impressed at how the 54LT was able to advance the probe through large, gravelly material."

The Discovery Drilling 54LT has earned the nickname, 'The Little Drill Rig That Could.' DJ added, "Even our most battle-hardened drillers had to comment on what a 'cute' little rig it was when they saw it for the first time! It's a great addition to our fleet, and we expect to use it much more in the future for remote site work."



DJ Wardwell with Discovery Drilling uses the 54LT to collect soil samples at Indian Mountain Air Force Station in Alaska near the top of the runway.

**DJ Wardwell • Assistant Operations Manager
Discovery Drilling Inc. • Anchorage, AK**

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The 54LT and MC5 soil sampler had no problems with the large, gravelly materials encountered at the Cape Newenham drilling location.



DJ Wardwell uses the 54LT to collect MCS soil samples near an active above-ground fuel line at a site at Indian Mountain in Alaska.



(below) DJ Wardwell, Assistant Operations Manager for Discovery Drilling, loads the 54LT onto the Skyvan at Cape Newenham after sampling operations were complete.



(above) The 54LT's small size and light weight made it a perfect candidate for remote Alaskan sites with logistical constraints. There was no need to disassemble any part of the rig for transport.

ALASKA

Cape Newenham served as a U.S. Air Force General Surveillance Radar Station until its closure in 1983. It has been re-designated as a Long Range Radar site and operates as an active part of the Alaska NORAD Region under the jurisdiction of the 611th Air Support Group in Elmendorf AFB, AK. As with Cape Newenham, Indian Mountain is supported by Elmendorf AFB, but it is generally unattended. Cape Newenham, in southwestern Alaska, is approximately 475 miles from Anchorage, and Indian Mountain is approximately 350 miles from Anchorage in central Alaska.

