Landmark Services
Help Brazil’s National E&P Databank Optimize Submissions

Customer: National Petroleum Agency of Brazil
Location: Rio de Janeiro, Brazil

CHALLENGE – Ensure that well data submitted by oil and gas companies to the national data repository meet agency standards. Increase the efficiency of personnel responsible for quality control (QC). Minimize backlog of wells awaiting evaluation.

SOLUTION – As part of ongoing solution delivery, Landmark Services developed customized solutions to enable ANP to optimize the initial QC of well data. Landmark also provided a web-based version for operators to use prior to submitting well data for loading into the databank.

RESULTS – Reduced QC phase one cycle time by over 80 percent. Eliminated a backlog of more than 1,000 wells in just six months. Transferred the initial QC process to operators, cutting staff labor by 2,100 hours per year. Enhanced data consistency.

REDUCING A GROWING BACKLOG OF WELLS
– Brazil’s National Petroleum Agency (ANP) was created in 1999 to oversee the demonopolization of the country’s oil and gas industry and to manage all technical data derived from exploration and production activities. By law, every oil and gas company that generates well or seismic data in Brazil must submit a copy to the ANP’s Exploration and Production Database (BDEP), a national repository built on Landmark’s PetroBank® database technology.

“To regulate the quality of data submitted to the BDEP, the agency established well and seismic standards that operators are required to meet,” said Diogo Freitas, Well Team Coordinator for ANP in Rio de Janeiro. “To ensure those data are consistent with standards prior to loading into the PetroBank database, ANP personnel subject them to extensive controls.” To evaluate well data, for example, in the past ANP ran them through two QC processes. In QC Phase 1, well team members validated the headers, and in QC Phase 2, they verified the logs.

Unfortunately, about 21 percent of the well data that operators sent to ANP failed to pass QC Phase 1 on the first round. Whenever well headers contained errors, ANP generated a fail report and sent them back to the operator to correct. Since evaluations were done manually, and some well files contained more than 30 logs, it took ANP approximately 16 hours to QC each well—including roughly three hours for Phase 1 alone. As a result, agency staff members were able to QC only five wells per week, which created a growing backlog of wells to be evaluated. “When the backlog exceeded 1,000 wells several years ago,” Freitas recalled, “ANP initiated project Backlog Zero and turned to Landmark Services for assistance.”

OPTIMIZING AND AUTOMATING THE QC PROCESS – As part of its ongoing solution delivery, Landmark’s service team in Brazil developed a unique system for ANP personnel to ensure that submitted well headers met
the agency’s required data standards prior to loading into the BDEP.
“Use of this tool effectively reduced QC Phase 1 evaluation time
from three hours to about 30 minutes per well,” Freitas said. This
slashed the previous manual process by more than 80 percent.

At five wells per week, it would have taken ANP almost four years to
eliminate a backlog of more than 1,000 wells. By deploying the new QC
system, however, Freitas’ team successfully caught up within just six
months. However, the technology could not prevent another common
problem at that time. “Not all operators corrected the data ANP rejected
on the first round,” he observed. “Thus, we found ourselves reevaluating
and rejecting some of the same well header data at least one more time.”
This proved both frustrating and time-consuming.

ENHANCING DATA VALUE, SAVING TIME AND
MONEY – Although perhaps the same number of wells—
approximately 21 percent—still fail to pass QC Phase 1, today
oil and gas companies perform the evaluation process, not ANP
staff. The agency now receives only well headers with 100 percent
approval status. Both of the solutions have significantly optimized
evaluations, and enabled ANP to reduce both headcount and costs.

By handing over responsibility for the initial quality control of well
data to the operators in 2010, ANP began saving more than 2,100
hours of labor per year. In addition, the agency has gained credibility
within the industry as a technology innovator by ensuring that more
consistent data are loaded into the BDEP.

“This is a great web-based tool for evaluating wells according to
ANP standards,” Freitas concluded. “With ongoing evolution and
automated QC enhancements, this and other technologies will
continue to increase our efficiency, and save time and costs in our
operations. More importantly, technology and transparent processes
will continue to add greater value to exploration and production
workflows in Brazil.”

ANP’s plans include providing log acquisition companies access
to this software before sending their log data to operators, and
engaging Landmark Services to develop another custom version for
seismic quality control.