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 these data are consistent with standards prior to loading into the database, the PetroBank database, ANP personnel subject them to extensive quality 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 standards quickly and accurately. Through this solution, ANP reduced its initial QC phase one cycle time by over 80 percent, eliminated a backlog of more than 1,000 wells in just six months, and transferred the initial QC process to operators, cutting staff labor by 2,100 hours per year. Enhanced data consistency.

Brazil’s Exploration and Production Database (BDEP) is built on PetroBank® database technology from Landmark. As of May 2011, it held more than 3 PB of pre- and post-stack seismic, and almost 26,000 wells.
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.

In-depth conversations between ANP and Landmark consultants resulted in an innovative solution. By creating a web-based version of the QC system, the agency could effectively transfer responsibility for QC Phase 1 to the operator prior to submitting well data to the BDEP. “To use this online solution, authorized members of the BDEP download and install a special component onto their computer, which extracts only the metadata necessary for QC Phase 1 and sends it to ANP’s servers,” explained Freitas. There, the system automatically processes the data, then informs the user whether the well has passed or failed the initial evaluation. “Only when data are approved can the operator submit the well for loading to the national data repository.”

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.