Wellbore issues leading to stuck pipe events can account for up to 60% of all nonproductive time (NPT) during well construction. In extreme cases, a stuck pipe can result in the loss of the drillstring and the hole section. Baker Hughes Surface Logging Services (SLS) has the technology and personnel to provide comprehensive monitoring of all geologic, gas, and operational trends, allowing early detection of deteriorating wellbore conditions that can lead to stuck pipe events. In this way, SLS field geologists improve drilling performance while greatly reducing NPT.

Planning, Prediction, and Prevention

Using offset well information, SLS field geologists prepare for each drilling phase by focusing on known problem zones and recognizing potential ones. No matter how efficiently prior wells have been drilled, there is always the possibility that stuck pipe incidents will occur in the current well.

Geology, formation pressure, and wellbore geometry are all variable factors that, along with drilling trends, are continuously monitored and correlated to the well plan. Constant communication between SLS field geologists and the rest of the drilling team assures that any trend deviation is investigated and appropriate action is taken.

Stuck Pipe Resolution

Stuck pipe can be mechanical in nature—generally caused by cuttings buildup in the annulus—or can be the result of differential sticking that occurs when the drillpipe is held against a porous and permeable formation by an overbalanced drilling fluid. Hole cleaning software built into the proprietary Baker Hughes software platform indicates where cuttings problems may occur along the wellbore, and cuttings mass-volume measurements at the shakers can be used to compare the actual amount of cuttings returned against the

Applications

- Exploration wells
- Deepwater wells
- Offshore shelf wells
- Onshore wells
- Development wells
- Wells with stuck pipe and wellbore stability problems

Features and benefits

- 24-hour surveillance of drilling data trends
  - Guarantees data delivery in all drilling environments
- Complete integration of geologic and operational data
  - Resolves stuck pipe events
- Competent personnel
  - Improves drilling performance
  - Ensures proactive rigsite communication
- Remote support with the Baker Hughes WellLink Radar™ remote drilling advisory service
  - Provides backup for wellsite personnel
  - Improves personnel safety
- Wellbore problem mitigation
  - Reduces NPT
  - Reduces costs
theoretical amount. With this information and the observation of drilling trends such as torque, pump pressure, and hookload, the onset of cuttings-related mechanical sticking is easily observed and remedied. The problem of differential sticking can be mitigated by knowing the geology, pore pressure, and drilling practices best suited to avoid stuck pipe.

Highly Qualified Staff
SLS field geologists are trained to the same high standards globally. Baker Hughes has been recognized and accredited by the International Association of Drilling Contractors for its competence program. Classroom, web-based, and on-the-job training are combined with strict task assessments to guarantee that SLS geologists are qualified to meet and exceed the service expectations of clients.

Integration and Collaboration
All SLS personnel work closely and communicate with client geology and drilling teams throughout the life of the well. Baker Hughes wellsight and office-based services also ensure excellent integration and collaboration between clients and Baker Hughes SLS, Logging While Drilling services, Drilling Fluids, Reservoir Development Services, and Remote Application Engineering personnel.

To learn more about stuck pipe prevention or any of the other services offered by Baker Hughes SLS, contact your local Baker Hughes representative or visit www.bakerhughes.com.