



Weatherford®

Well Service Manager™ Planning, Scheduling, and Evaluation Software



Efficiently gather and store well information for effectively managing all well activities including planning versus actual cost management.

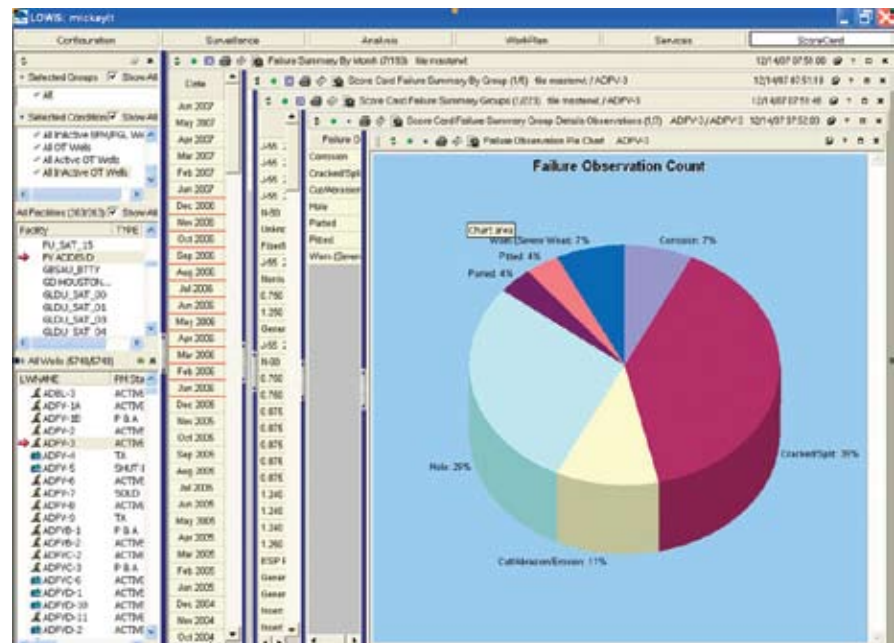
As part of the **Field Office™** suite of production optimization tools, *Well Service Manager* (WSM) software provides an efficient way to gather and store well information for effectively managing all well activities and the assets used for those events.

Many times, the process of drilling a well is finished before costs are analyzed. Correctable cost overruns are not identified until the crew has moved on to the next well site and ability to arrest the overruns is done in hindsight rather than at the time of occurrence. During production, wells that are down need immediate attention to reverse lost revenue back to production. Every hour, day, or days that a well waits for a rig repair is a liability so operators need to find ways to bring wells on line as fast as possible.

“Looking at a WSM scorecard we found that rigs were spending too much time waiting on other things. By focusing on these resources, instead of throwing more rigs at the problem, we were able to get production on faster.”

Adding more rigs to a field operation is not always the answer. Without an organized way of administering additional rigs, you can end up with more downtime for your resources. Getting production started faster after a well installation or repair requires having the precise assets ready for each job at the appropriate time. Nothing else will do. Rigs waiting on materials to arrive or a high priority well waiting for a rig are both detrimental to starting wells in a timely manner. And time is money.

That is why Weatherford created WSM software. The applications that make up this program provide you with the ability to track, view, and manage drilling and well intervention jobs in an organized way that allows you to make better decisions regarding resource usage, well prioritization, and allocation of operational funds. With WSM software, you get more from your assets and can be confident when it is time to make additions because you have the information needed to effectively use your resources.



WSM provides easy-to-read charts for concise analysis.

Why WSM?

Whether times are good or bad, optimal use of resources is a concern to all operators. Unfortunately, many field organizations grow so fast that their processes cannot keep up. Increasing numbers of rigs at a field eventually create logistical issues that hinder the rate of return of those resources. The answer is organizing records and providing a clear visualization of field activities so you can manage well interventions that assure assets are used optimally, jobs are properly prioritized, and remediation for well failures is done efficiently and effectively for the long term.

Better organization and operational results come from consolidation of information and visualization of the planning, scheduling, and management detail. However, too much data can be as bad as no data. Rather than providing multiple systems for collecting data, Weatherford combines the data from many disciplines and creates easy to digest information for comparison and analysis. The system can help you migrate away from the proliferation of spreadsheets, handwritten notes, and disparate software systems to an organized method of gathering, storing, and displaying the information needed to properly manage all well activities.

When a well fails, lost revenue is only the beginning of cost issues. Repair expenses, lost rig time from proactive maintenance, and time for failure assessment all increase the total cost of a well failure. WSM helps to reduce those losses in two ways. First, it helps you improve the quality of the repairs with historical information about the well. This assures that the same repairs are not repeated over and over without changing the design of the repetitive failure area. Second, the software provides the right information to be communicated to the crews so they are ready with the proper tools, parts, and tasks that need to be done. Ultimately, quicker and higher quality repairs result in reduced failure rates and a lower mean downtime in the future.

Better organization leads to better management. Without the ability to see where equipment is being used or waiting; how long the tasks are taking; and cost comparisons for each job, it is not possible to manage the amount of time spent on intervention tasks. By having the information available on screen to track the location and status of each task, you are able to administer manpower and equipment to optimize the use of both and prioritize tasks based on the availability of assets, locations of jobs, and the value the well provides. When the job is finished, you can also validate the invoice compared to the estimate and compare those costs between jobs to evaluate the efficiency of the crews.

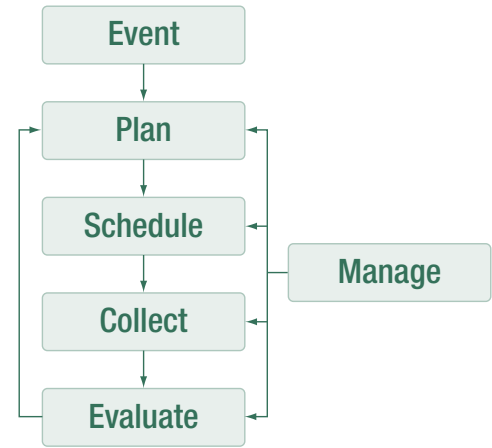
“Considering economics of my jobs, I can see if a job is worth doing and in what order.”

“Having accurate run life of equipment allows us to proactively change specific wellbore components at our own pace.”

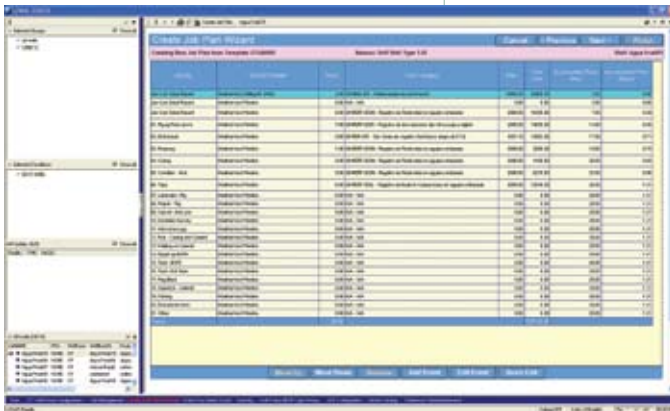
“Rigs are a limited resource. We can make good decisions on the best place to send one next.”

How it Works

Weatherford provides several tools for identifying exceptions to normal well operations and trends to predict irregularities so interventions can be scheduled for proactive maintenance or repairs. When an event requires an action, WSM software is used for planning, scheduling, data collection, and job evaluation.



The WSM module allows you to manage the process through every stage of a well intervention.

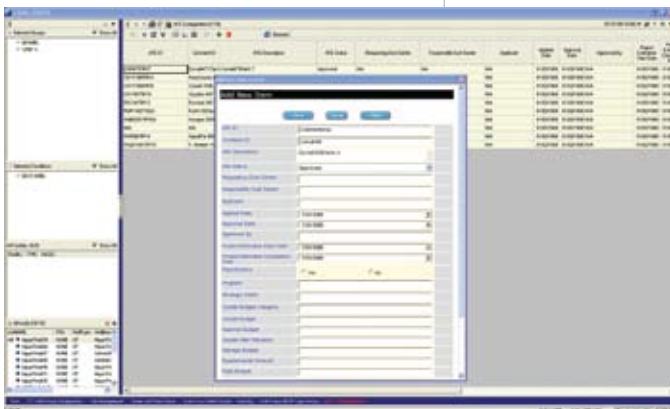


Planning

Once it is determined that an action is needed, planning begins. A corrective or maintenance plan is created for the undertaking. The job plan contains each task needed to complete the intervention properly. Details are specific and planning times are based on historical information of similar work for that field.

Well information includes each component’s history of repair and replacement along with the exact components that are currently in the well. That way, the planner knows what has worked in the past and the crew knows exactly what they are going to find. No surprises.

The costs are automatically estimated as tasks are entered into the plan. The estimate can be used to verify rig crew expenses.



Scheduling

When the plan is entered into the system, you have all the information to schedule the job. Since expense and revenue deferral are not the only factors to consider you can effectively prioritize pending tasks using cost, availability, and location parameters. By having visibility of assets and crews, you can take advantage of circumstances where an idle rig can be used for a lower-priority job without delaying the higher-priority job due to location and availability.

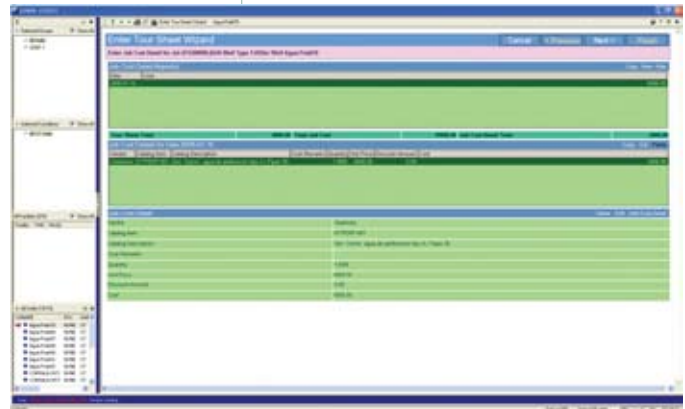
Scheduling interventions needs to remain fluid to be most efficient. The operator must be able to quickly adapt to unforeseen circumstances that threaten to lower the efficiency of rig and crew utilization. This can only be accomplished with complete visualization of the entire field and the information WSM software provides.

Data Collection

The WSM module allows you to collect data from the field while jobs are going on. That gives you up-to-the-minute recognition of the progress of the tasks which allows you to accurately pinpoint the completion time of each activity. With that knowledge, you are able to evaluate job progress, reschedule assets, and manage the entire process with a clear vision of the activities.

Crews use a mobile computer to update job progress and time is only editable by authorized managers. That means the crew must update the computer when passing from one task to another. The time on the jobs are recorded as they are started. The field workers must update each task upon completion which immediately updates information for the field office manager.

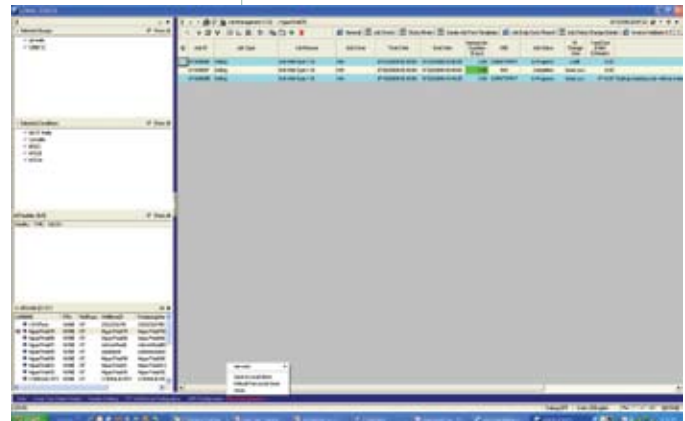
The manager can see updated parameters that include dates of service, dates waiting, work and waiting hours, costs associated with each aspect of the project, vendor information, and rig detail including current location and wellbore equipment with run life. All events that occur at the well are tracked. They include everything from a morning safety meeting to site preparation, chemical treatments, pulling rods, and anything else that occurs at the well. The system is fully customizable, so any task that needs to be done can be easily added to the program.



Job Evaluation

By displaying jobs and assets on an easy-to-follow screen, the manager can track individual task times, see where each resource is being used or underused, reschedule to improve efficiencies, and ultimately reduce the total amount of assets needed. The necessary information is displayed in an intuitive interface that not only tracks the progress of the actions, but displays the estimated costs incurred with the projects.

Seeing work progress ensures that tasks are done efficiently and assets are used optimally. Analysis tools such as ad-hoc displays and trends are available to study job correlations. Additionally, the program can be linked to **LOWIS™** software to compare job effects on well performance to historical data. This provides the ability to evaluate the cause and effect of well interventions to changes in, or cost of, production.



Why Weatherford

WSM technology has been field tested for many years and input from customers has made the product stronger. The application is in a constant state of advancement which insures that you have a state-of-the-art tool that will continue to grow with you.

Additionally, you can feel confident that the support and strength of Weatherford International will be there with you for the long term. The worldwide infrastructure provides regional support when and where you need it. Weatherford's vast experience in all parts of the drilling and production aspects of the oil industry, has demonstrated to its large customer base that Weatherford means quality and value.

Options

WellScribe™ Mobile Data Collection Module

Collecting information in the field with a handheld device (mobile computer) or full-sized PC insures accuracy because each event is entered as and where it occurs. The screens are designed to accommodate field use.

WellScribe tablet is a specially designed device that runs *WellScribe* software. The unit provides an easy-to-use interface sequence with large touch-screen button format that can be used with safety gloves. The device is durable and able to handle the rigors of life in the field.

WellScribe mobile is a barcode scanner that simplifies data input by eliminating keystrokes. The task list for a job is printed on a sheet of paper so field crews merely need to scan each task as they start and complete them.

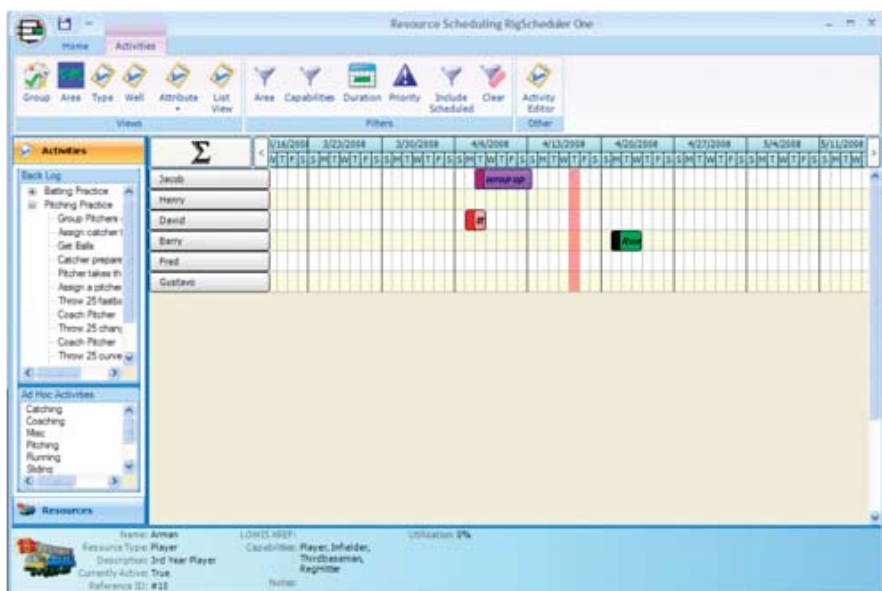


Mobile interface provides an easy-to-use method for data viewing and input.

RigPlan™ Resource Scheduling Module

Weatherford's *RigPlan* desktop scheduling tool provides the visualization and control needed to assure that rigs and assets are effectively used. The user interface provides a multi-level calendar that displays where each rig is currently working, its expected completion time, and the timeframe for the next scheduled job.

Times are updated based on input from the WSM module. If a job is running long, the user can see the effect it will have on future jobs and allows rescheduling to better use rigs without incurring unnecessary downtime. The application provides more than just a calendar of scheduled events. Operators using *RigPlan* software can prioritize by logistic visualization meaning that if there is an opening in the schedule, a rig can be rescheduled to that job even though it may not be the highest priority job in the queue. It allows the operator to take other factors into consideration such as location of nearby rig and the expected time to complete the task versus the travel time to a different task. This allows all the rigs to be used optimally rather than just following a list of highest priority jobs in chronological order.



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