



# Hunt Wallace, LLC

## A PowerLog Success Story

*In early 2000, a group of technical people from Mobil's research center decided to strike out on their own. Together they formed Hunt Wallace, LLC, a professional petroleum consultancy providing products and services to the international oil and gas community. They set out to be among the best, and knew that to achieve that mission they would need the best technology to complement their people. After careful consideration of their formation evaluation options, Hunt Wallace selected PowerLog.*

Hunt, Wallace & Associates provides leading-edge geo-technical services and professional training to the Petroleum industry. Its experienced team delivers innovative, high-quality reservoir description solutions and includes geologists, geophysicist, petrophysicists, reservoir and data specialists who have worked in multidisciplinary asset teams within major oil companies. Core services include: integrated reservoir-characterization/description, integrated formation evaluation, 2D/3D geological and geophysical modeling, well test design, analysis and on-site supervision, database management, resource risk assessment, valuation and data migration services, and completion/production optimization design and analysis.

From the very beginning, the principals at Hunt Wallace knew that their success depended on three key elements: their experienced people, their use of first class evaluation tools and their commitment to quality. The consultancy provides a range of products and services including multi-disciplinary reservoir studies, well data editing and management, formation evaluation and well testing services.

"A key ingredient in all our products and services is the care that we put into validating and interpretation of all the well data," stated Jim Wallace, Hunt Wallace principal and a working petrophysicist. Wallace has been a petrophysicist for more than 20 years and has successfully completed over 100 projects worldwide. Wallace worked for Schlumberger and then spent 20 years at Mobil before co-founding Hunt Wallace.

### **Technology Selection**

"We decided very early on that we needed to select the very best technologies," commented Wallace. "To do so, we established four criteria that all software must match in order to be part of the Hunt Wallace portfolio. This has helped us ensure that we have the best tools for our people."

Because it is so critical to their success, Hunt Wallace also re-evaluates their selections each year.

The four selection criteria established by Hunt Wallace are:

1. **Windows-based.** The software must be fully functional in the Microsoft Windows environment.
2. **User Friendly.** It must be easy to use by geologists and petrophysicists as well as data technicians. It must also be sophisticated enough to run Hunt Wallace's proprietary algorithms.
3. **Quick Service.** The product has to be backed by good service, because Hunt Wallace depends on the software to do their work.
4. **Low Cost.** As a small business, Hunt Wallace needs to control costs and ensure that they get the biggest 'bang for their buck'.

When it came time to select a formation evaluation package, Hunt Wallace looked at PowerLog, plus packages from Kingdom suite, Landmark and others. Wallace was already impressed with PowerLog from his days at Mobil, where he had the opportunity to look at many products. "After evaluating

these products,” concluded Wallace, “PowerLog was the overwhelming choice.”

## **PowerLog Benefits**

Hunt Wallace has been using PowerLog for more than four years now as an integral part of its work. Along the way, the company has come to rely on several key capabilities.

### **Portability**

Hunt Wallace operates all over the world, in places like Equatorial Guinea, Qatar, Abu Dhabi, Egypt, Nigeria, Russia, South America, the United States and Canada. One of the great advantages of PowerLog is that the consultants can easily take it on the road with them. They can work at well sites, customer locations and even on airplanes.

“Our customers often ask us to come on site and show them our results or even do additional work there. They are always impressed with the speed and capabilities of PowerLog.” When the consultants are back in the home office, it is a very easy process to upload the curve data to the central system.

### **Multi-well capability**

PowerLog can easily handle the high volume of logs involved in the big field studies and short-term research Hunt Wallace does for its clients. “For our business, the multi-well capability is very powerful,” added Wallace. “We can literally process thousands of wells at one time. PowerLog’s multi-well capability is far superior to any other program that I have seen to date.”

### **Data Integration**

In addition, cores and other data can be combined with logs—a feature important to Hunt Wallace clients. “Lots of our work comes from people who want to integrate core, wireline logs, and other data,” explained Wallace. “PowerLog gives us the best opportunity to integrate all of this data. This is a must for us.”

### **User Friendly**

At Hunt Wallace, the consultants work together in multi-disciplinary teams.

Individuals in these teams use PowerLog in different ways. The product provides specialized capabilities to each discipline, enabling them to easily get their work done.

- **Data technicians** like using PowerLog for the batch loading capability. They look at several wells at a time and do a lot of curve splicing, data gap filling, depth alignment, and curve plotting. They find the product easy to use, and often teach themselves how to use additional functions.
- **Geologists** like using PowerLog for the Quick-Look models for net sand and porosity calculations to input into their maps.
- **Petrophysicists** are true power users. They like creating their own programs and adding user-defined algorithms, both proprietary and commercial. They like the Synthetic Curve Generator for data reconstruction, particularly in wash-out conditions. And they like the linear matrix inversion lithology and porosity modeling capability of StatMin.

“PowerLog’s user friendly modules allow our geologists, data technicians and our more advanced users—petrophysicists—to run the program and get the results that they expect,” concluded Wallace. “And not only that, the results are accurate—and our clients demand accuracy.”

## **PowerLog in Action**

### **Reservoir Studies Example**

At Hunt Wallace, reservoir studies are based on multi-disciplinary teams of geologists, geophysicists, petrophysicists and reservoir engineers. “We all get together and integrate our processes together to come up with a final product,” explained Wallace. Part of the reservoir study product is developing geological models, structure and stratigraphic maps and models, doing the reservoir property calculations for porosity, permeability and water saturation. All of these data are input into a reservoir simulator to predict oil in place.

“When we do a reservoir study, PowerLog gets used right from the get go,” said

*“For the kinds of projects that Hunt Wallace does on a routine basis, PowerLog gives us the biggest advantage over any other systems that we have evaluated.”*

*“PowerLog gave us our biggest bang for the buck.”*

Wallace. The data comes in CD format, floppy disks or tape and is loaded into PowerLog. “With its useful tools for loading, particularly batch loading, we can load a lot of wells very quickly.” Also, naming conventions are really important in a reservoir study and PowerLog lets users name all of the curves similarly for each type of measurement.

Next, data technicians start looking at the data. They look for gaps and they splice runs together to create one continuous log for each well. Once that’s completed, the specialists start working on depth alignment. “PowerLog gives us a very distinct advantage of doing things on-screen in terms of moving depths, increment by increment or by bulk shifting data quickly.”

After the alignment process is complete, they move into a normalization process. They compare data from a standard. “Using two point calibration, crossplots or histograms that are in PowerLog, we have the ability to normalize data very quickly.”

The next step is environmental corrections. Again, PowerLog plays a big part in making environmental corrections such as bore hole corrections and side bed effects.

In cases where there is bad log data due to wash-outs, Hunt Wallace uses PowerLog’s Synthetic Curve Generator. This allows them to reconstruct sonic, density and neutron logs if needed. In fact, many Hunt Wallace customers like that particular feature because it restores the data to a pristine log that they didn’t have before.

Next, the petrophysicist becomes involved, using the data to calculate volume shale, porosity, water saturation, and permeability. All of these are handled quite easily in PowerLog, according to Wallace.

Once the evaluation is complete, Hunt Wallace outputs the data to CD, an Excel spreadsheet or whatever the geologists and geophysicists need for their evaluation purposes.

### **Multi-Well Example**

Recently a client came to Hunt Wallace with a problem that illustrates PowerLog’s real strengths. The client had several thousand wells to process. Much of the data had been

hand digitized and hole conditions were poor. It had never been checked and most of it had some sort of issue.

“The only product that I know could handle the problems that they had with these data is PowerLog,” commented Wallace.

The first phase of the project entailed data reconstruction. There were lots of hole washouts and missing data. Hunt Wallace relied heavily on PowerLog’s Synthetic Curve Generator. “PowerLog gave us the ability to reconstruct logs where the data was just so badly washed out,” continued Wallace. “We used wells that were surrounding the bad well to fill out the correction algorithm and reconstruct the variety of log measurements that we needed.” Hunt Wallace was also able to reconstruct the bad hole zones in each measurement.

The second phase of the project was depth matching all of the data. Because the data was hand digitized, measurements were off-depth. Hunt Wallace data technicians were able to use the depth matching routines in PowerLog to get the data back on a reference depth.

The final phase required data splicing, gap filling and noise filtering. PowerLog quickly handled the splicing and the gap problem. Using the filter program, Hunt Wallace was able to edit out noise and leave an acoustic log that was usable.

As a result, Hunt Wallace’s client was able to perform a regional study that they couldn’t do before with this data. Where they had bad hole conditions before, they now have pristine data. Follow-on reservoir studies can now be performed using this data, which will enable the client to predict oil in place in the subsurface.

### **Great Service**

After more than four years, Hunt Wallace continues to depend on PowerLog as their formation evaluation product of choice. Over those years there have been times when Hunt Wallace has tested the limits of PowerLog, and each time an issue arose, Petcom quickly and completely addressed it.

“We like to get on the telephone and talk to a real person about problems and issues that

*“We continue to evaluate our software every year to ensure that we have the best in class, and PowerLog is always the clear winner.”*

might come up,” confessed Wallace. “We need to know that someone understands the problem and has taken ownership in solving it.” Recently, Hunt Wallace received a large data array and had trouble loading it. After a quick call to Petcom, Hunt Wallace was assured that the problem would be fixed in a day. “Sure enough, we got our results the next day and were able to get back to business and solve our client’s problem.”

## Summary

Hunt Wallace has relied on PowerLog since the company first opened for business and continues to do so today. Its many consultants in varied disciplines find it to be effective and efficient. It is certainly economical.

“We’ve been in business now for over four and a half years and every year we evaluate our software products,” said Wallace. “PowerLog has always been our overwhelming choice.”

## About Petcom

At Petcom, we focus on the needs of petrophysicists, geologists, reservoir engineers and anyone else who needs to interpret well log data. Our product, PowerLog, is the industry standard for Microsoft Windows-based petrophysical analysis. PowerLog is the most economical and user-friendly package dedicated to log data interpretation and presentation available today.

Petcom has more than 170 customers in 48 countries. These customers are among the best-known names in the business, and include consulting companies, majors, independents, wireline companies, service companies and individuals. Petcom is backed by the Fugro-Jason support network.

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