



See the unforeseen.




From planning onwards, P1™ can be utilised to monitor and improve well construction performance and to evaluate options in the event of a problem. The software accounts for the fact that risks in well design are not intuitive, and that sometimes the lowest cost option may carry the greatest business risk. P1™ adds value and knowledge throughout the project management process, from project selection, conceptual design right through to programme execution.

P1™ has been developed to improve well construction performance. The use of the software and the associated procedures ensure that all risks and opportunities can be examined thoroughly in the design phase, with well costs

viewed as a range of likely outcomes. The system allows informed decisions to be made on all aspects of planning, from the conceptual phase right through to spud and during operations.





“Built by well construction engineers,
for well construction engineers,
P1™ probability software is
designed to reduce risk and
maximise performance.”

Chris Ferrier, Director.

All's well that starts well

P1™ provides a rigorous, standardised and systematic approach to many of the key elements of successful well construction such as:

- Probabilistic time estimating
- Probabilistic cost estimating
- Risk quantification and mitigation
- Statistically credible option selection
- Mechanism to provide clear communication with all stakeholders
- Forecasting time and cost outcomes
- Standardisation across wells, projects and business units.

The P1™ tool and the complete process encompassing its use provide the basis for Performance Management including:

- Operational look-ahead
- Phase-by-phase analysis of Actual vs. Planned performance (Benchmarking)
- Technical limit approach
- Data Quality and Analysis.

4 out of the top 6 leading oil companies use P1™

Companies using the tool also derive the following benefits:

Formalised risk management process with greater understanding of risk -

Well engineers benefit from a process that allows them to compare options on an objective basis, rather than relying on instinct which is often flawed. Increased understanding of project risk will maximise chances of successful project completion.

Improved cross functional communication -

Improved level of team work through the participation of all stakeholders in the building of the models. As the risks are identified and analysed, specific, engineered mitigation measures or contingency plans can be designed.

Informed decision making -

Use of P1™ facilitates a more informed basis for discussion and choosing between options.

Packed with decision making features

- **Operational Model** – The well plan is broken down into a series of operational phases and sub-divided into events.
- **Cost Model** – All the costs that relate to the well being planned are captured. Costs can be one of 3 types: Day Rate, Cost per Unit or Lump Sum. The costs are assigned to individual or a range of phases
- **Contingency/Project Risks** – P1™ allows contingency events to be entered. Contingencies can be applied to individual or a group of phases. Such contingencies might be Wait on Weather (WOW)
- **Process Flow Map (PFM)** – The Process Flow Map provides a visual representation of the sequence of events that make up the P1™ model
- **Multiple currencies** – P1™ supports multiple currencies which allows costs to be entered in a native currency before converting and reporting on a project currency
- **Probabilistic Cost Estimate** – Using the information entered in the Cost Model, P1™ can generate a probabilistic AFE. The AFE splits costs between drilling and completion costs and displays the AFE in the project currency.
- **Cumulative Probability** – curve for time/cost – Using the results of Monte Carlo simulation, P1™ generates cumulative probability charts for both time and cost. These charts display a range of times or costs plotted against the likelihood of occurrence from P0 – P100
- **Phase duration charts** – Phase duration charts allow the team to indentify the phase(s) that have high inherent risk. By focusing attention and effort to these areas risk can be mitigated, reduced or even eliminated
- **Tracking** – By recording the actual duration of an event, analysis can be performed on the model to compare Planned versus Actual performance. It can highlight relative planning performance, how any scope change impacted the project or highlight relative operational performance. Such analysis can aid the team by identifying opportunities for training, lessons learned or even good practice.

Choose the perfect package to suit your business

P1™ is available in the following editions:

- **Express** – Standalone non-networked
- **Workgroup** – Multi-user Networked (LAN)
- **Enterprise** – Multi-user Networked (WAN)
- **Hosted** – Hosted Application Service (SaS)

AGR offers a standard training course for P1™ which is targeted at new users of the software and provides a standardised approach to building models. The one-day course offers an introduction to Quantitive Risk Analysis, and takes delegates through building a simple model to more complex applications.



Probably the best commercial decision you will ever make

- Specifically designed for well construction
- Built by well construction engineers for well construction engineers
- Geared to the improvement of performance
- Easy to use
- Mirrors traditional way of planning a well
- Allows for a consistent approach
- Helps engineers understand the well delivery process
- Enables well construction team to consider risks in planning a well
- Recognised as the leader in the application of probabilistics to well construction
- Provides effective medium to carry out DWOPs
- Platform to capture offset data
- Produces a probabilistic time and cost estimate for a given well
- Handles correlation
- 6 day look-ahead – drilling programme outline
- Provides audit trail record of drilling operations
- Easily modified to review alternate options
- Easy to read outputs
- All reports generated in Microsoft Excel
- Produces project process flow map
- Handles contingencies
- Option comparison feature
- Can be used to track operations
- Different platforms available.

P1™ clients include:

Shell, NEXEN, Chevron, Talisman Energy, BG-Group,
AGR Petroleum Services, AGIP KCO, Repsol YPF and Wintershall.

Should you wish to find out more about P1™
or how it may be of help to you please email p1@agr.com

AGR Petroleum
Union Plaza
1 Union Wynd
Aberdeen
AB10 1SL
Tel: +44 (0)1224 629000
Fax: +44 (0)1224 629001
Email: p1@agr.com
www.agr.com

