P1™
Probabilistic well cost and time modelling
P1™ is designed to generate time and cost estimates along with the risk profile of a well. The software is applicable for all different types of drilling and well operations, including completion, well intervention, slot recovery and abandonment.

The system enables informed decisions to be made and accounts for the fact that operational risks are not intuitive, and that sometimes the lowest cost option may carry the greatest business risk.
All’s well that starts well

AGR’s P1™ software provides a rigorous, standardised and systematic approach to many of the key elements of successful well modelling 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.

The tool incorporates a large database of public well data, which can be complimented with the user’s private data.

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 engineers, for well engineers, P1™ probability software is designed to reduce risk and maximise performance.”
**Value Planning**

**Conventional vs P1™**
Conventional planning which is based on a deterministic approach will provide a single answer. P1™ on the other hand, which is based on a probabilistic approach, will force the engineer to think about a range of possible outcomes and their likely probability of occurrence.

**Time and Cost Estimate**
P1™ includes detailed costs which can be either tangible or intangible. By expressing these costs as either lump sum, unit rate or day rate, the engineer can quickly understand the financial impact of their decisions.

**Event Model**
P1™ is based on Monte Carlo simulation which generates thousands of probable outcomes, called scenarios, which might occur in the future. Events are characterised by distributions (uniform, PERT, triangular and spike), with a correlation coefficient applied to prevent collapsing to the mean.
## Standard Output

### Range of possible outcomes
With a range of possible outcomes, actual data can be compared with the model to monitor progress as the well is drilled. That way corrective action can be taken at an earlier stage.

### Likelihood of achieving targets
Cumulative probability distributions highlight the likely chance of success, together with the best (technical limit) and worst case scenario.

### Outcome influences
With a breakdown of output by phase, it is easy to identify which phases pose the most significant risk. That way additional mitigation plans can be put in place.
Additional Output

“x” day lookahead
The fully configurable “x” day operational forecast is exported direct from P1™ and is used operationally to optimise logistics planning. Boats, load out lists and actual timings can be added to further refine the process and project ahead.

Flowchart
The events and sub events can be plotted as a process map and can be used to understand the inter-dependencies of events and the critical path, which are highlighted in the output.

Approval for Expenditure
An Approval for Expenditure (AFE) can be produced which will detail tangible, intangible and consumable costs. The effect and source of changes to the model can also be easily understood.
Probably the best commercial decision you will ever make

- Specifically designed for well performance management
- Geared to improve well time and cost modelling accuracy
- Easy to use, cloud based
- 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 of publicly available data and client specific 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
- Software as a Service (SaaS)

Should you wish to find out more about P1™ and what it can do for you, please email: p1@agr-software.com
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