



WHITE PAPER

IMPROVING THE WELL CONTROL INSURANCE PROCESS

EXECUTIVE SUMMARY

The current process of issuing a well control insurance policy is mostly paper based and remains so throughout the life of the policy. Plans are submitted to an underwriter and premiums are assigned based on the plan. At the end of the drilling cycle, those plans are often not compared to what really happened and as a natural consequence, premium payments are inaccurate; they do not reflect the actual risk that was offset.

Claims processing is similarly paper based and consequently, takes months to process.

The opportunity exists to move this entire process to a data driven platform that will capture the drilling plan from the beginning, assign an appropriate risk, and then compare the plan to the drilling execution in real time. The real time drilling data can be passed through third party algorithms that will send notification to all the interested parties if dangerous conditions are developing, which mitigates potentially costly claims.

Claims, should they arise, can be executed on the same data driven platform and thus paid out faster and with complete transparency.

PROBLEM DEFINITION

Given the risks naturally associated with drilling for hydrocarbons, risk control insurance coverage is a non-negotiable business essential. In the event of a catastrophic loss of well control, drilling contractors and operators face existential threats, and even small incidents can swing a company from profitability to bankruptcy in one unforgettable instant.

Well control insurance terms and conditions vary widely depending on type of well and geographic regions, but generally, policies and premiums are based on drilling plans submitted to the insurer who then assigns a risk profile to the plan. As the plan is executed, premiums are paid and while they are generally associated with the reality of the plan execution, they are often not truly synced up with the actual drilling.

Right here, in the variance of plan to reality, is the core problem to be solved.

In current practice, to the extent that the plan and its execution are compared, it is done after the fact, and based on drilling reports that might be on paper and months old.

A decorative graphic in the top-left corner consisting of a cluster of overlapping hexagons in various shades of orange and yellow.

The claims process takes all of the manual inefficiencies of the submissions process, adds in all the variance associated with the individuals in charge and reduces it all to a paper-based claim.

The insurer must bear in mind these many elements as the claim is evaluated. The insurer then brings to bear its own temptations and bad habits. For example, if a massive payment is due, the interest generating potential of that tranche of money is factored in as the payments slowly passes its way up the chain to the insured. The funds are held up in various locations for weeks and months since that serves the interests of the underwriter. Even if the claimant did everything right and there is no question the validity of the claim, the money is withheld to serve an entirely unrelated interest of the insurer.

Removing human fallibility from the claims process is another core problem to be solved.

SOLUTIONS

The solution to the above issues is a distributed ledger technology (DLT) based insurance platform utilizing quasi- real-time well footage information from the rig that auto-populates the insurance drilling reports. Such a system would eliminate inefficiencies, inaccuracies, and possible over-payment of insurance premiums by the operator and other interests in the well.

A significant benefit of this quasi-real-time platform lies in analytics where blowout losses can be avoided, operational efficiencies increased, and avoidable lost time events eliminated. While the implications of this are obvious, the use of this real-time safety technology opens the door with insurance underwriters for discussions regarding premium reductions due to the provable reduction in risk the real time systems have to offer.

Data Gumbo is in the process of building an insurance transaction platform (PaaS) as well as an underwriting platform (UaaS) for Lloyd's through our insurance partner Prescient Underwriting Management & Associates and drilling analytics partner, DrillSage. The combination of these three entities solves enormous problems in the upstream drilling industry providing a valuable risk management solution to Equinor.

OVERSTATED PREMIUM COSTS

Control of Well Insurance is a prime example of the inefficiencies that exist in insurance processing. Control of Well insurance is a key component in an Upstream Insurance Program.

The premium basis for Control of Well Insurance is directly related to the drilling footage. While there is significant variance in the way Control of Well insurance is managed by different insurers, brokers, and operators, conceptually the process is similar across the board as follows:

1. An estimate for the upcoming year's drilling footage is given to Underwriter's which may be overstated for the following reasons:
 - a. Geologist plans for the best-case scenario.
 - b. This estimate may be high/conservative from the operator's point of view for AFE with a buffer of additional footage included in case it is needed.
 - c. The estimate may be higher than actual because the Insurance Broker may use the inflated footages to negotiate lower rates.
2. There typically will be a deposit premium charged payable in several different ways such as monthly, quarterly, semi-annual, and annually.

However, as noted, the overstated footages may never be communicated correctly to the underwriters for a credit. And while this is true generally, the larger the Operator, and the larger the number of other interests involved in the well, the larger the problem.

These problems are inherent in the way policies are written, but that is just the first part of the proposed solution. The other part has to do with limiting the potential for payouts caused by damage claims.

The same system that reconciles the drilling footage plan to reality will be used to ameliorate the safety risks by preventing large blowout losses and mitigating avoidable lost time. This step-change is achieved through a data-driven platform that will capture the drilling plan from the beginning, monitor the drilling operations in real-time, utilize third-party expert systems and algorithms, automatically generate notifications of developing problematic operating conditions in the wellbore, and automatically escalate notifications to stakeholders if conditions are ignored or become more dangerous.

SUMMARY AND BUSINESS BENEFITS

Benefits are delivered to the stakeholders through reducing cost of operations and mitigating potentially costly claims:

- Identifying and reducing inefficiencies in the underwriting and policy terms process by combining automation and field data, enabling a potential savings of between 5 and 30% of total insurance costs for a well program, depending on the policy and well.
- Creates an immutable, auditable risk management record for each well hosted by a neutral third party and shared with all required parties.
- Improved operational efficiencies during drilling operations by early identification of suboptimal drilling conditions hours in advance of becoming a discrete problem—e.g. stuck pipe, lost circulation, kicks, blowouts, etc. A typical lost circulation event can cost \$20 million dollars or more on an offshore well. A typical onshore unconventional Eagle Ford well stuck pipe event can cost \$1.6 million dollars or more.
- Early identification and mitigation of conditions conducive to a kick or developing blowout. Avoiding blowouts, both mini blowouts that do not result in loss of life, or catastrophic events such as Macondo (11 dead, \$140 billion+, offshore Gulf of Mexico) or Pryor Trust (5 dead, expected 9 figure cost +, onshore Oklahoma).