



35% IMPROVEMENT IN HOLE SUCCESS RATE



Capital Drilling's (Capital) commitment to deliver on client targets resulted in a significant 35% improvement in hole success rate together with reduced costs in some areas for their client.

The company's success demonstrates a number of its cultural approaches to any project – a willingness to go the extra mile to achieve client targets, a professional drilling culture and an uncompromising commitment to safety.

HIGHLIGHTS & ACHIEVEMENTS

- Improved hole success rate by 35%
- Enabled client to meet stringent ore body definition criteria, not previously attainable
- Improved hole stability, enabling holes to progress that would otherwise have been abandoned
- Drilled deepest holes on site (greater than 2,200m) to required total depth, despite challenging conditions
- Exceeded client's expectation by four metres per day on one hole
- Delivered cost savings to client attributed to a reduction in drilling muds used
- Total Depth (greater than 2,200m) reached 11 days earlier than client budget on one hole



BACKGROUND

The surface lithology at the deep hole directional project, based in Eastern Europe, had proven difficult to penetrate prior to Capital's commencement. Miocene, up to 300m in depth in some areas, contributed to holes not reaching client requirements and only a 50% hole success rate on the directional targets.

EXPERIENCE AND PROFESSIONAL SERVICE DELIVERY

We significantly improved results for our client by implementing a number of measures including: improving equipment capability; investing in the latest consumables technologies; specifically employing world renowned drillers for the project; and providing best practice training to local drill crews.

We imported specialised equipment and larger drill rigs from around the world to ensure adequate capacity to reach the deep directional targets. Centrifuges were also used – recycling drilling muds significantly reduced usage of muds and water on site.

By working closely with our consumables suppliers, we introduced high quality, leading technologies suitable for the challenging lithology. In particular, cementing processes and mud programs were formulated for the difficult conditions and down-hole failures were reduced as a result. Hole stability improved notably, production rates increased and hole completion improved 35%.

Due to the depths and complexities involved, we specifically employed world renowned deep hole drillers and supervisors for this project. Our team had extensive experience in many global deep hole directional programs, which was leveraged to address drilling challenges. The team also provided invaluable support and training in best practice drilling methodologies to our local drilling employees.

CLIENT BENEFITS

Our approach to the project delivered several benefits to our client. Most importantly, by improving hole success rates, it enabled them to achieve the specified targets required to meet stringent ore body definition criteria they had not previously been able to attain.

In addition, the introduction of mud recycling equipment delivered real savings to the client due to significant reduction in drilling muds used.

Productivity improved substantially, with crews achieving greater than 28m per day on several machines at depths between 1800m - 2200m. On one hole (greater than 2,200m), the required total depth was reached 11 days earlier than client budget, and progress exceeded client expectations by four metres per day.

Improved hole stability reduced hole abandonment and enabled two of the deepest holes to be completed to depths greater than 2,260m, with capacity to continue drilling.



ESTABLISHED MODERN SAFETY STANDARDS FOR THE COUNTRY

We have an uncompromising commitment to safety, regardless of location or local standards. We introduced a modern safety culture and structure to the site - a first for drilling projects across this country.

Our global safety standards implemented on the project included Safe Work Procedures (SWP's), Job Safety Analysis (JSA's) and safety monitoring and reporting structures.

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