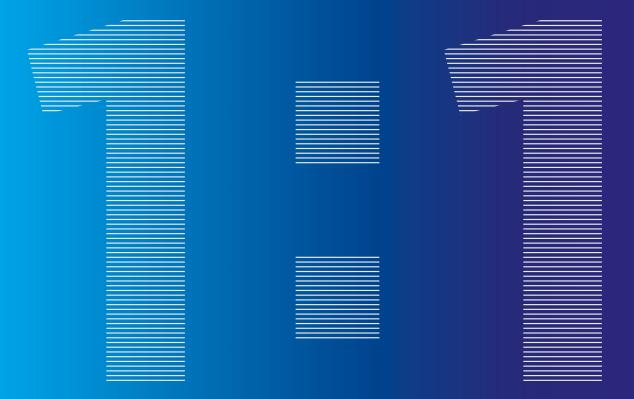


Know your well





RATIO OF ANALYST TO OPERATING CREWS

ACQUIRED AND ANALYSED MORE THAN 14 MILLION FEET OF LOG DATA THAN 6 HOURS

MORE THAN 50% **OF ANSWERS DELIVERED IN LESS**

Insight into your wells

Oil and gas operators can't afford to have a partial or inaccurate picture when it comes to well integrity or production — today those stakes are too high.

You need to truly know your well to ensure that value is maximised and that you can make the right decisions, first time and with confidence. Partnering with the organisations that can deliver the most robust production and integrity evaluation information, while remaining affordable and impartial, is the conundrum now facing many operators across our industry.

Which is where READ Cased Hole comes in...

Qualified decisions, quickly

READ is the specialist in production, integrity and reservoir evaluation.

The definitive information that we deliver helps you better understand the performance of your wells. This enables you to make qualified decisions quickly, while minimising risk and maximising efficiency.

Through our sole focus on production, integrity and reservoir evaluation, we have an enviable track record for delivering straightforward solutions to the most complex of well situations, utilising proven technology.

High-value well intelligence

Our expertise is dedicated to production, integrity and reservoir evaluation.

We provide you with the high-value well intelligence you require to know your well. These facts are crucial to managing expected well performance, unwelcome surprises and the long-term economics of the asset.

We know the stakes are always high in well integrity and production. That's why we will work with you to understand the needs of every job, ensuring we provide clear, concise and understandable information, designed to minimise risk, maximise safety and deliver profitability.



What makes us different

Our expertise is dedicated to production, integrity and reservoir evaluation. We support you across the life-of-field, providing the intelligence you need to make informed decisions about your wells, to a timescale that benefits you and your business. We are responsive and responsible. Where you are, we go. Our agile and highly-skilled team is resourced and ready to mobilise worldwide when you need us.



We present the facts. You make the right decisions.

In an era where operators are routinely confronted with reams of data, pressure to buy add-on services and spiralling costs, we believe that specialist organisations will thrive.

We know that you increasingly rely on subject experts to cut through complexity, work around the challenges and get the job done.

Our response is simple — the complex does not need to be complicated. We will present the facts to enable you to make the right decisions for your well, quickly and with confidence.

Our services and technologies... solving today's challenges

We know we must provide you with clear, concise and understandable well integrity and production evaluation information.

We also appreciate that no two wells are the same and that a one-size-fits-all approach can often fall short of what is required to deliver the best solution to your challenges.

That is why we will work with you to develop and implement innovative applications of our proven services and technologies to solve your challenges.

Responsive and responsible

We are a smart and forward-thinking company, resourced and ready to mobilise tools and people at the shortest of notice, without the burden of long scheduling queues.

We take pride in working in partnership with some of the industry's blue-chip operators and continue to nurture these relationships by never losing sight of your needs.

This includes a commitment to meeting all operator briefs — and taking a problem-solving approach to any challenge you face with your well, supported by our best-in-class technologies and best-in-market diagnostics. You can depend on us to meet your well integrity and production needs and can be assured that we will always seek to add that extra value — and will not be satisfied until you have the right, high-quality information for each and every well.

Independent data interpretation you can trust

To know your well, you need the full picture, with verifiable evidence, and facts clearly prioritised. Day in, day out, we deliver these answers faster than anyone else, through the expertise and experience of our ANSA Team.

This in-house team provides concise, reliable and highly detailed information on which you can make your decisions, quickly and confidently.

Our experts are available on a 24-hour basis to distil the facts and communicate the answers, delivering the ultimate responsive service.

We provide an analyst for every job and have pioneered a Fast Turn Around service that delivers critical information quickly, to enable near real-time decisionmaking and immediate action at the well site.

READ-only technologies

We have an established reputation for developing new and innovative solutions to meet industry needs. One such example provides accurate intelligence when the heat is on...

High pressure, high temperature wells bring unique challenges and require specialist high-precision technology to ensure you get the definitive information you expect.

Our 40-Finger Caliper Tool has been developed exclusively by READ to enable industry-leading integrity logging of these challenging wells. It is used to evaluate the integrity of tubing or casing, providing precise assessments of barrier condition.

Through its high resolution and high data density measurement, our HPHT caliper technology provides a continuous map of the well's internal surface, providing you with an essential, detailed understanding of your well's integrity.

03 : PRODUCTION EVALUATION

We understand that an ever-increasing global demand for oil and gas brings with it the need to get more from your existing wells, within ever-tightening cost constraints.

The challenge of achieving sustainable and profitable extraction has never been more complex... but it doesn't need to be complicated. READ has the subject experts to cut through complexity, work around the challenges and get the job done, allowing you to unlock the potential from your well.

It's all about knowing your well...

- Managing risk
- Helping develop your field strategy
- Monitoring and maximising production levels
 - Enhancing production rates
 - Identifying & rectifying
 - defects early
 - Reducing Non Production Time (NPT)
- Ensuring well control
- Minimising remedial costs

...inside and out

CASE STUDY

Array PLT survey accurately pinpoints water shut-off location and leads to estimated gain of 900 BOPD (USD 22M p.a.)

THE CHALLENGE

A multi-national operator was experiencing increasing water production in a highly deviated well. They wanted to identify the appropriate zones for water shut-off operations.

Due to the high deviation, high water cut and stratified flow regime, conventional PL technology would have been unable to resolve the small volume of hydrocarbons flowing on the high side of the well, as well as the relevant entry points.

The client therefore engaged with us to develop a solution that would deliver more accurate and insightful results.

THE SOLUTION

We proposed two runs utilising the industry-leading Multiple Array Production Suite (MAPS) technology. The first run would perform an initial assessment and identify which zones to close. We would then confirm the results by re-running the PLT after SSD manipulation to shut off the water producing zones.

We deployed the MAPS tools in memory mode on coiled tubing. This provided a comprehensive 3D image of the multi-phase flow profile across the entire well bore.

Our in-house ANSA team of qualified and highly experienced analysts used the data acquired to deliver an interpretation solution in just four hours.

They were able to identify the water producing zones with no associated oil production and recommend which sleeves to close to reduce water whilst maintaining oil.

THE RESULTS

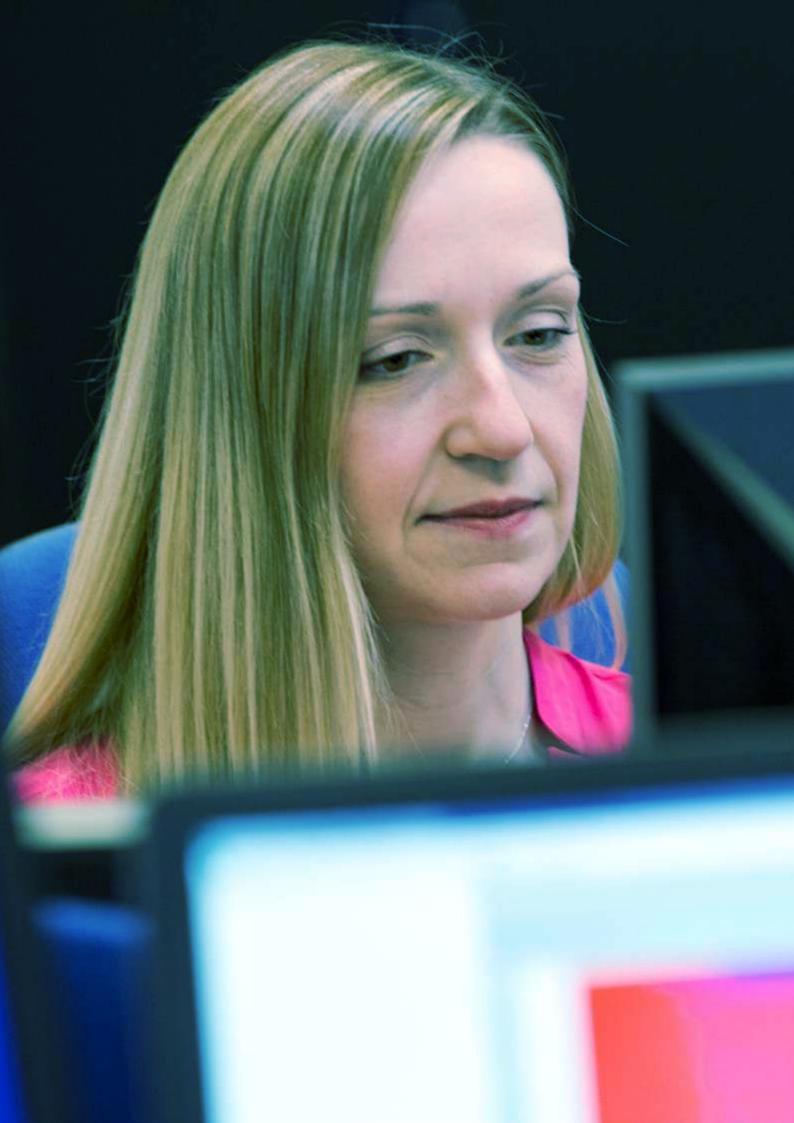
The client was able to identify the water entry points and take appropriate action for remedial water shut-off.

Our expert fast turn around data analysis enabled them to make quick decisions with confidence on which inflow devices to close.

READ's recommended actions led to a 150% increase in hydrocarbon production due to pressure redistribution after zone closing.

Although some water producing zones had been isolated, the redistribution of pressure caused a substantial increase in production from adjacent zones. This resulted in an estimated net gain of 900 barrels of oil per day, but also returned the water to pre-shift rates.





04 : INTEGRITY EVALUATION

The physical demands of a well are harsh, with many challenges across the design, engineering, operating and abandonment phases.

Getting the full picture of your well's barrier performance and understanding its structural integrity play a vital part in managing risk, extending operating life and optimising the management of your wells across the lifecycle. Our know-how and expertise provide the answers.

Protecting your asset...

- Managing risk
- Protecting your reputation
- Avoiding environmental consequences
- Complying with legislation
- Addressing vulnerable areas
 Identifying & rectifying
 - defects early
- Prioritising remediation
 - Minimising remedial costs
- Planning downtime
- Extending operating life

... it pays to be well informed

CASE STUDY

Bringing a new dimension to understanding complex well restrictions Well Accessibility Modelling technology

THE CHALLENGE

A multi-national operator required to boost production in a maturing asset. The asset was producing around 25% of peak output and it was suspected that reserves were trapped above the top of the perforated interval.

Intervention was planned to re-perforate selected wells in the knowledge that reservoir pressures had dropped significantly during production — and several wells were known to have deformation of liner.

THE SOLUTION

We identified that there was a lack of clarity with existing evaluation. It had been providing a 2D approximation for a problem that required 3D clarity.

Data acquisition was not an issue, however, enhanced analysis was required. Faced with this challenge, our in-house experts created an innovative 3D model, based on multi-finger caliper data, to obtain a more detailed evaluation of well geometry.

Through our determination to present the operator with the full facts at their fingertips, we presented detailed computations to determine critical measurement factors and pinpoint areas of deformation causing most significant risk to well access.

THE RESULTS

We delivered detailed, quantitative evaluation through 3D clarity, allowing the operator to make critical decisions about the future of the well.

As a direct result of the intelligence we provided, our customer was enabled to:

- Manage risk vs optimal operational performance for future well interventions
- Put plans to re-perforate the well on hold, having established that the risks outweighed reward at this time

05: RESERVOIR EVALUATION

The clarity of our reservoir insight allows you to plan and implement remedial actions, quickly and with confidence. It's because the stakes are high that we remain committed to providing the fast, accurate answers required to manage highly valued assets effectively.

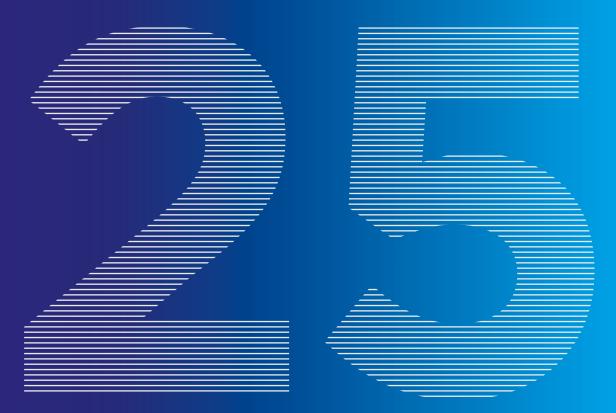
Our specialist reservoir evaluation technologies, including our cuttingedge pulsed neutron technology, deliver highly accurate measurements and give you an improved understanding of your well production.

Bringing you closer to the reservoir...

- Providing insight into your wells
- Identifying and exploiting bypassed reserves
- Improving operational efficiency
- Maximising hydrocarbon recovery
- Enhancing production rates
- Minimising remedial costs
- Improving operational efficiency



MORE THAN



YEARS CLOSELY SUPPORTING CUSTOMERS

WORLD LEADER IN COILED TUBING MEMORY LOGGING 1,500+ ANSWERS DELIVERED FOR OUR CUSTOMERS

Know your well

www.readcasedhole.com