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A NEW DIAGNOSTIC FROM **Mineplex** × **Libero AI** with CaNeTA Intelligence

Mineplex and Libero AI have come together to offer the Critical Control Management Diagnostic - Mineplex's field and statutory assurance paired with Libero AI's CaNeTA Intelligence causal risk analysis.

Queensland just made critical control management the law. If you're an officer, it now has your name on it.

On 1 June 2026, Queensland became the first jurisdiction in the world to write critical control identification into mining law. I've spent more than twenty years as a Site Senior Executive, and in that time I haven't seen a change that reaches the boardroom as directly as this one.

Most of the coverage has focused on what sites now have to do. That matters. But the part I keep raising with boards is the part that's easy to miss: this duty doesn't stop at the mine gate, and it doesn't stop at the company. It lands personally, on officers, and it cannot be delegated away.

The duty has your name on it

Under s47A for coal and s44A for mines and quarries, an officer of a corporation must exercise due diligence to ensure the corporation meets its critical control obligations. "Officer" reaches the board, the CEO, the CFO and the COO. The Site Senior Executive - and anyone reporting to the SSE - is carved out of this particular duty and carries direct obligations elsewhere.

Two things about that duty tend to land hard once they're understood. An officer can be convicted **whether or not the corporation has been charged**. And due diligence is something each officer has to evidence **personally** - it can't be assumed, and it can't be handed down the org chart.

This isn't theoretical - just ask the New Zealand chief executive

In March 2026, the High Court upheld the personal conviction of a chief executive for failing the officer due diligence duty under closely comparable legislation, after a workplace death - leaving a $130,000 fine and a $60,000 costs order in place (Gibson v Maritime New Zealand [2026] NZHC 813). The finding wasn't that he'd been reckless. It was that he hadn't taken reasonable steps to assure himself of how the work was actually being done.

> *A senior officer cannot assure themselves of safety from a distance.*

That sentence is the whole shift, really. Receiving a report is not the same as being assured. Queensland's officers now sit under the same logic, with the added weight of a world-first statutory duty above them.

No one will tell you how to comply - and that's the hard part

There's no regulation that prescribes *how* to do critical control management. That sounds like freedom; in practice it lifts the bar. With no prescribed method, the defensible position runs through recognised good practice, the ICMM 2026 Good Practice Guide (updated in April 2026), and diligence you can actually evidence.

ICMM's own diagnosis is blunt, and I agree with it: the gap in our industry isn't knowledge. It's **application**. We know what good looks like. We're inconsistent at proving we've done it.

Three words decide whether you're covered

ICMM reduces good practice to three words, and the duty mirrors them. They look simple. Each one is where I see organisations quietly exposed.

IDENTIFIED

It starts before the controls, with credible Material Unwanted Events. The controls you then name have to be genuine - intentional, hazard-specific, and verifiable in the field - not procedures that got relabelled "critical" over the years. If a control depends on a worker being perfect on a bad day, it's hope dressed up as a control.

IMPLEMENTED

Forty years of human factors science tells us performance is situational and people drift to the easier path. Controls that lean on human performance rarely meet the bar a true critical control demands. Most "human controls" in a bow-tie are safeguards worth having - but they're not the primary line of defence against a fatality.

VERIFIED

This is the limb that's hardest to fake - s47A(3)(f) and s44A(3)(f). The officer's duty is to hold a reasonable basis for confidence: the kind you could defend if a regulator asked what you knew, what you tested, and what you relied on. Verification is where reassurance becomes assurance.

The language has deliberately moved from "*identify and document*" to "*verify and act*." That last word is where most boards are exposed.

Why your current tools won't get you all the way there

A risk register treats events as isolated line items. A bow-tie examines one scenario at a time. Both are useful, and neither shows you how risks connect across an operation, or which control quietly carries the most structural weight. You can verify every control on your

list and still be looking in the wrong places.

How I'd actually go about evidencing it

In my view it takes two kinds of evidence working together - and neither can stand in for the other.

- **Field and documented assurance.** Boots on the ground, testing whether the things called critical controls are genuine, and whether they actually work where the work happens. This is the part I won't outsource to a spreadsheet.
- **Structural assurance.** Turning the data a mine already holds into a causal network - a connected map of how risk events trigger, propagate and concentrate - so verification is aimed where the network weight actually sits.

The structural side leans on CaNeTA - Causal Network Topology Analysis - a peer-reviewed methodology out of the University of Queensland's Sustainable Minerals Institute. It ranks controls by structural load and surfaces single points of failure, sleeper risks, and the "failing-lucky" patterns that don't show up one incident at a time. The analysis accelerates and structures the work. The judgement stays human.

What it looks like when it works

Mitchell Services, one of Australia's most diverse drilling companies, ran this kind of analysis across their safety data. They weren't short of verifications - they were carrying out tens of thousands. The value was in connecting them.

56,000
critical control verifications in 2025, at a 0.81% failure rate

59 / 186
controls showed active failure signals once verification and maintenance data were read together

100%
of verification questions now test control effectiveness, up from a 65% baseline

The controls managing the hardest-to-see hazards were degrading faster than anyone had assumed - and that only became visible when the verification and maintenance data were finally analysed together. As their GM of People, Risk & Sustainability, Josh Bryant, put it, the work surfaced "hidden connections and blind spots" across transport and maintenance that let them build genuine resilience into the system.

Where this leaves you

If you're an officer of a Queensland mining company, the question to sit with isn't just "*do we have critical controls?*" Almost everyone does. It's narrower, and harder: **can we prove they're identified, implemented and verified - personally, and to a standard a regulator would accept?**

That's the gap I built the Mineplex Critical Control Management Diagnostic to close. If you'd like to talk through where your assurance actually stands today, I would welcome the opportunity to have a conversation.

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Scott Graham is the founder of Mineplex with more than 33 years across open-cut and underground coal, metals and exploration and 20 years as an Site Senior Executive in Queensland. Mineplex provides specialist mining safety and risk services, including the Critical Control Management Diagnostic. mineplex.com.au

This article is general information about the legislation, not legal advice; officers should obtain advice on their own position. CaNeTA was developed at the University of Queensland Sustainable Minerals Institute (Lin et al., 2024). Case-study figures are illustrative and vary by operation.