To operate widely distributed Coal Bed Methane (CBM) fields more efficiently, reliably and safely – a solution that integrates both technology and expertise is essential. Honeywell understands the unique requirements for CBM production and has incorporated them into an integrated, scalable and robust CBM technology from the wellhead to the head office. Our integrated CBM solution better supports the lower margin unit returns, and high exploration & production (E&P) activity, characteristic of CBM developments. This ultimately means a lower total cost of ownership to you, the owner and end user.

From Remote Wellheads To Head Office

Honeywell has developed an end-to-end solution specifically for CBM (also referred to as Coal Seam Gas or CSG) producers — from the wellhead to head office; and from well completion to the market. We deliver an integrated enterprise-wide technology platform that can help you to:

- Lower operations & production monitoring capital and operating expenditure
- Rapidly deploy solutions to assist with meeting integrated planning targets for full field developments to commercialise CBM production
- Assist in monetizing CBM by proving-up the commercial viability of CBM plays
- Lower maintenance costs of remote CBM operations
- Optimize production planning and scheduling
- Report on environmental compliance
- Secure personnel access and CCTV management of CBM assets
- Enhance safety, and minimize exposure to risk
- Promote cross-functional collaboration and workflows
- Reduce travel, labor and downtime
- Improve the effectiveness of your workforce in managing the large number of wells typical of CBM production
- Provide accurate real-time data to operations, commercial and management teams for confident business decisions

End-to-End technology for the lifecycle of CBM fields

Ramp-Up and Business Readiness:

Honeywell has the experience and portfolio of automation solutions to enable your business to not only control and monitor your CBM fields, but also control your CBM business operations.

To operate a CBM field efficiently, it is important that well delivery is supported by an automation & collaboration infrastructure that enables operation teams to harness the value of the ‘big data’ being generated by potentially thousands of assets. By automating business processes and focusing only on situations that demand attention, industry leading companies are able to not only operate and maintain those assets remotely but also maximise the productivity of the workforce. In supporting this, operators must maintain compliance with rigorous safety, commercial and environmental constraints across the value chain.
The Process Knowledge System

Services, technology and business knowledge deliver the most value when they're integrated and synchronised.

The Experion® Process Knowledge System (PKS) from Honeywell unifies people with process, business and asset management, providing synergies that lead to more efficient, reliable and safe operations.

At the center of Experion PKS is a leading SCADA and ICSS system. Experion’s Distributed System Architecture (DSA) technology suits the large number of assets required and allows systems physically scattered over CBM fields to operate as one integrated system.

Importantly, in our Experion R430 assets are managed as a template build specific for Upstream and therefore equipment can be created automatically. Experion Equipment Libraries contain predefined equipment templates with all the necessary points, parameters, alarms, graphics, trends etc to fully represent the equipment. Refer to Vertical Scaling section for more details of this valuable characteristic.

Remote Operations and Maintenance

CBM fields have a large number of geographically distributed assets, which can create high operational and maintenance costs. Honeywell addresses these issues by providing the technology and systems to reduce the number of remote maintenance visits while providing high asset visibility and availability, support for collaborative decision making and automated workflows. This is made possible by technology designed specifically for remote distributed assets like:

- Advanced equipment health analysis and preventative maintenance technologies
- Automated field operator rounds
- Mobile operator workstations
- Self diagnosing and alerting instrumentation
- Remote, distributed architecture – providing robust communications and control
- Remote video to verify alerts – eliminating some visits
- Utilising collaborative and operational process-aware technologies to improve timely decision making, and importantly action.

Remote wellhead monitoring and control: From the pilot phase to production - the monitoring and control of CBM wells is a critical part of scaling up to commercial production.

Honeywell’s remote wellhead monitoring and control solution provides:

- Wellhead instrumentation
- Remote control and data acquisition
- Wireless communication back to centralized SCADA
- Maintenance information to the central control room
- Expandable from pilot to production – reuse
- Mobile asset – able to be relocated as required

Safety Management: Keeping your personnel, environment and assets safe is critical. Honeywell’s suite of solutions provides multiple layers of protection – from emergency shutdown systems to fire and gas systems and detectors. Honeywell’s integrated safety solutions also let you monitor equipment for shutdown analysis, monitor leakage and use simulators to handle process verification, engineering verification and operator training.

Our ICSS includes built-in SIL3 safety controllers, built-in Compressor Controls and many other features to satisfy comprehensive business needs in a compact and easy to maintain package.
Environmental Management: Honeywell environmental management applications integrate your automation and information systems to ensure regulatory compliance while reducing risk. Disparate data is validated and then presented in reports, spreadsheets and internal web pages. This provides a continuous improvement environment to ensure that your facilities meet the real-time monitoring, record-keeping and reporting requirements of water handling and air emission standards and permits.

Facilities and Security Management: Our solutions work together to safeguard your facilities, people and the environment. From access control to CCTV to personnel tracking – all are available in a consistent user window.

Well Performance Monitoring: Having 100s or 1000s of wells it might be uphill to detect, analyze and prioritize well performance issues. Honeywell’s Well Performance Monitor (WPM) for CBM provides performance analysis and collaboration tools to monitor, visualize, analyze, and catalyze actions on well performance in real-time from a web browser, anywhere, anytime.

WPM enables performance analysis up through the operational hierarchy from wells to Plan of Developments (PODs), to gathering systems and full field developments, all by rendering CBM-specific performance metrics (e.g. KPIs for managing the relation of PCP torque and BHP, alerting to changes in CBM well Standard Operating Procedures throughout water reduction, production, and post peak-rates) and views, and providing visibility from wellheads to surface facilities.

WPM importantly supports event-based surveillance to detect conditions compromising well performance and integrity, and allows the creation of tasks and workflows to ensure that remediating or mitigating actions are taken.

Running on the Intuition® Executive technology platform, WPM focuses in the imperatives of human-based factors to enable optimal collaboration with colleagues across multiple sites and engineering centers. It uses federated data from multiple sources such as production, asset, process, GIS and simulation databases, directly within the Microsoft ecosystem of tools such as SharePoint (for content management, workflow and collaborative meeting workspaces), Windows Communication Framework for integrated audio visual (e.g. MS Lync), Microsoft Outlook and other MS Office tools for offline desktop analysis, content collection and reporting.

Supply Chain & Production Management

Planning and Scheduling: Based on the scaling and large number of widely distributed assets required for CBM production, planning, scheduling and monitoring of CBM activities can be optimized by leveraging smarter technology. Honeywell’s planning and scheduling applications transform your plans into optimized production targets. You can integrate optimised schedules with gas commercialisation solutions for nominations and trading systems to help manage planned over & under production, and integrate with maintenance plans, to maintain well and field production profiles to ensure that the market demand and contractual obligations are met.

Production Management: Our suite of solutions offers your business greater operational efficiency and visibility than standalone applications.

We can support the full hydrocarbon and water accounting function from validated inventory and reconciliation, movements, blends, through to allocations.
Enterprise Collaborative Solutions

With Honeywell’s Intuition Executive collaborative work platform, data from disparate sources can be blended to render composite KPIs, dashboards, reports and so on, surfaced into a single collaborative environment. The way that Intuition Executive truly supports federated data architecture means we provide a perspective into master data sources with less maintenance and data synchronisation. This means that we still support the “single version of the truth” and knowledge sharing across your company, but lowers effort in systems and data maintenance. This complete picture of your operation enables you to make real-time knowledgeable decisions about issues such as well and asset performance.

Importantly, Intuition Executive enables the development of composite solutions central to well management to better understand the relationship of assets, people, work, and product, in relation to location and property information. When considering the geographic distribution and vast number of assets, it is key to manage who is entitled to work or operate on what well or asset, when, safely, with the right training, and with no restrictions or concerns relating to access to the land or property where asset is located.

This is fundamentally important in CBM where field production invariably overlaps with sensitive environmental, cultural, private land or property concerns.

Vertical Scaling

Given the very high rates of E&P activity necessary to make CBM commercial, we take the need for template-based (or a ‘manufactured unitized’) solution deployment, a step further. In our support for more rapid deployment of E&P assets, and also for the management of change throughout a well’s production lifecycle, we enable vertical scaling from the RTU through to the Remote Collaboration environment at Head Office; when new wells come online, and as wellheads and RTUs are commissioned and configured at the control system.

As such Honeywell’s CBM technology is designed for scalability; streamlining configuration from wellheads to the head office. Therefore the efficiency in control and information management solutions relating to assets (e.g. wells) can be significantly improved. This means less maintenance, less concerns about synchronisation of data throughout systems, and importantly a Lower Total Cost of Ownership, as our technology moves with the pace of your business. As such, our Experion PKS system and our Enterprise Collaboration, Production and Operations Excellence solutions propose to be an enabler for doing business, not an impediment.
What Makes Honeywell Better?

At Honeywell, we specialize in providing total end-to-end solutions for the gas industry. As a trusted name in process control for more than half a century, Honeywell is now setting a new standard in safety, reliability and efficiency for Coal Bed Methane exploration and production; with innovative products and trusted solutions from wellheads to the head office and from pilots to full production.