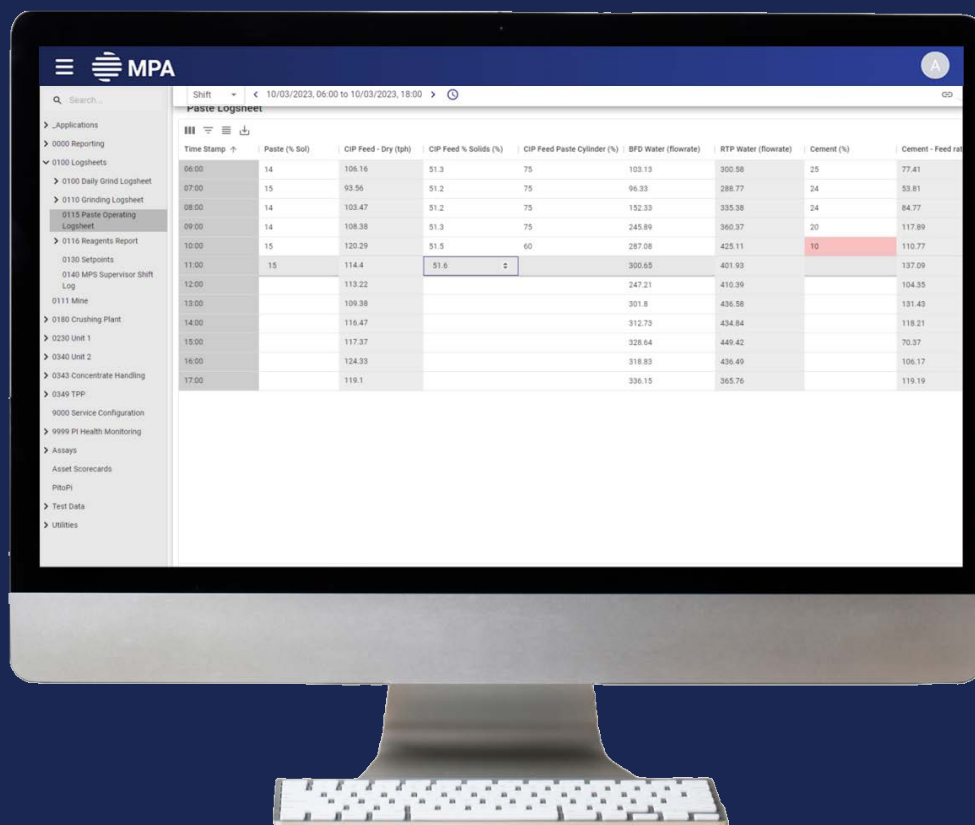


# Logsheets

Making real-time insights and actions visible to all stakeholders



Transform the way you capture and manage data with Logsheets

# Contents

About Logsheets . . . . .	3
What are digital logsheets . . . . .	4
Features and benefits . . . . .	5
Why choose Logsheets . . . . .	6
Support provided . . . . .	7
Technology requirements . . . . .	7
Logsheets case study . . . . .	8
Testimonials . . . . .	9
How Logsheets compare . . . . .	10
Logsheets FAQs . . . . .	12



# About Logsheets

## Introducing 'human sensors' via digital logsheets

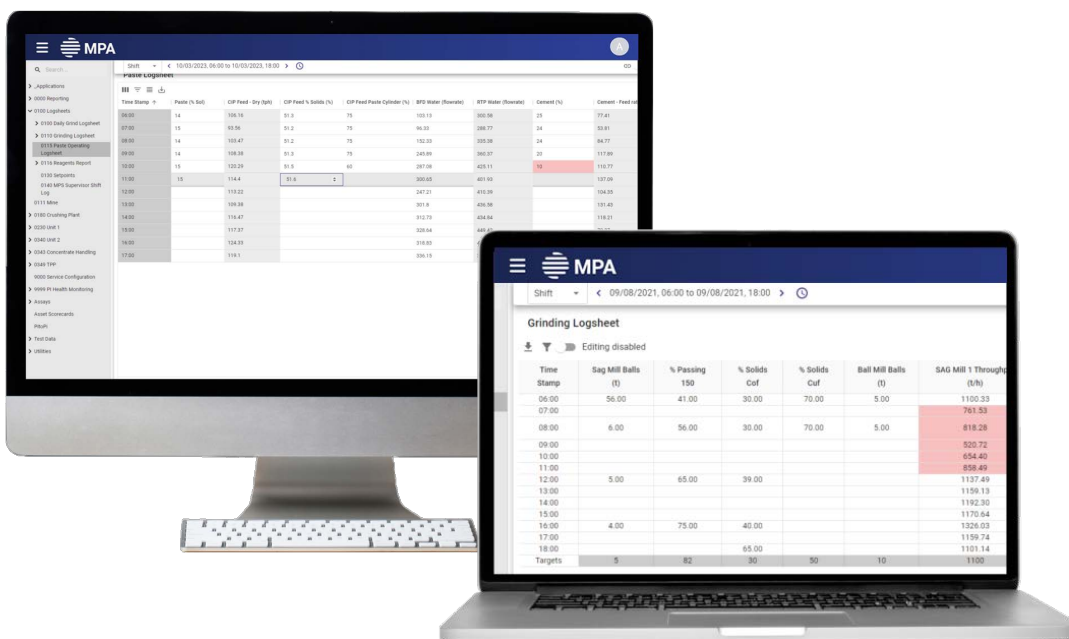
Logsheets makes real-time insights and actions visible to all stakeholders. Users will be able to push and pull (manual data entry) data to other systems from a single user interface. Logsheets has the functionality to collapse organisational layers and elevate communication from the front line to the management table. Increase transparency and visibility with Logsheets.

## Why Mipac?

Mipac is a global leader in operational technology, control systems and engineering services, with over 26 years experience. Mipac delivers high-quality, intelligent solutions that drive performance.

Imagine a world where your complex operation realises its full potential. At Mipac, we believe by empowering teams with operational insights and foresight, we can help organisations optimise production, minimise variability and enable operational excellence.

Logsheets is a part of MPA. MPA is Mipac's suite of integrated applications to optimise production, minimise variability and enable operational excellence.



# What are digital logsheets?

In today's fast-paced world, industries continually seek new ways to optimise production. One such solution is digital logsheets, a modern way of recording, monitoring, and managing critical data in real-time.

## What are digital logsheets?

Digital logsheets are an electronic replacement for traditional paper-based logsheets that record and track vital data manually. With digital logsheets, users can capture data in real-time and store it electronically for easy access and analysis. Data can be entered manually alongside real-time data and multiple users can access the information simultaneously, through various devices, enhancing collaboration and communication across teams.

## Use cases

Similar to the traditional logsheet approach, digital logsheets can track non-instrumented plant data, operator observations and response taken on specific actions. This information can help identify areas for improvement and enhance overall production efficiency.

Other use cases may include record compliance-related data, such as regulatory requirements or environmental monitoring. This information can help ensure companies comply with legal requirements and industry standards.

## Benefits of using digital logsheets

Digital logsheets allow teams to rapidly visualise key performance factors and indicators, leading to quicker response times to deviations. Through the ability to compare and analyse logsheet data in real-time alongside instrumented production data, plant operators can resolve production deviations faster by collaborating with colleagues to recommend and implement corrective actions to issues as they occur, rather than waiting until the next production meeting.

Traditional approaches to logsheets are prone to error through manual data entry or copying of data between systems. By leveraging digital logsheets with the capability to warn users when data is being entered outside operating ranges or for dates and times that are not current, teams can reduce these errors ensuring data is current and correct.

Additionally, digital logsheets provide a single source of truth, ensuring data is stored in a central location, typically in a historian system alongside other production data. By integrating directly into an existing historian, teams can leverage existing investments made in infrastructure, whilst also reducing time spent on transferring or duplicating data between systems.

Digital logsheets offer a modern and effective solution to traditional paper-based logsheets. They offer a range of benefits, including increased efficiency and accuracy, cost-effectiveness, improved data analysis and enhanced safety and compliance. With a wide range of use cases in production, digital logsheets are a valuable tool for any industry seeking to optimise its operations and stay ahead of the curve.

# Features and benefits



## Real-time data upload and download

MPA's Logsheet application provides native manual data entry beside real-time automated production data from other sources so you can compare variables, take action and capture observations.



## Practical time contexts

Set pre-defined time contexts that match your operation. Navigate backwards in time to view historical observations and actions taken to mitigate production deviations.



## Full visibility

Key production data is immediately available to multiple systems and stakeholders so you can accelerate decision making and control production deviations.



## Minimise errors

Logsheets can warn users when data is entered outside typical operating ranges or for dates and times that are not current.



## Respond immediately

Real-time visibility across systems means stakeholders can immediately become aware of production deviations so they can provide advice on countermeasures and capture actions taken.



## Leverage investments

Take advantage of MPA's templating capability and leverage prior investments in other systems, such as AVEVA PI, to evolve and extend Logsheets over time.



## Automate data collection

Integration between MPA applications and other systems such as SQL, AVEVA PI and Power BI means data flows seamlessly to production and inventory reports without the need for manual transfer and duplication.

# Why choose Logsheets?

Logsheets are a critical tool for capturing operator observations, non-instrumented plant data and comments on actions taken in response to different situations. In mining, we often use paper-based or MS Excel-based Logsheets to capture the above information and distribute to various stakeholders including other operators, engineers and managers. Doing so introduces several problems:

## 1. Information lag

Information captured in logsheets is often not made available to stakeholders or other systems for 12-24 hours (if at all, in the case of paper-based logsheets). Often, that information contains critical knowledge of production deviations that need to be controlled but cannot be until it is too late.

## 2. Catastrophic failures

How often have you received the following message from your MS Excel-based logsheet 'System Error – Catastrophic Failure – Damage to the file was so extensive that repairs were not possible?' Often the error occurs on submitting the logsheet and without sufficient time to resolve before the production meeting, leaving stakeholders scratching their heads as to what happened on the preceding shift/s.

## 3. Data duplication

There is often a rush to transfer data from logsheets to other systems before the production meeting and end-of-month reconciliation. Manually transferring data is a waste of time, is prone to errors and can lead to multiple sources of conflicting data.

## 4. Multiple versions

Version control of paper-based and MS Excel-based logsheets can be a challenge. Poor version control can lead to superseded logsheets being used that are missing recently added critical information fields or updated operating ranges.

## 5. Multiple concurrent user limitation

Paper-based and MS Excel-based logsheets are typically limited to a single user at a time capturing information. That means critical production information and actions taken to control deviations may be lost for future reference.

## 6. Instrument drift

Paper-based, and to a lesser extent, MS Excel-based logsheets limit the ability to compare manual measurements with instrumented data. That means critical instrument errors often go unchecked until it is too late.

# Support provided

We understand that different customers have different support needs, which is why we offer two levels of support. Our standard support package is designed for customers who need basic support, while our premium support package is ideal for customers with more complex needs or customised solutions.

Standard support provides access to our knowledgeable support team for assistance with any software-related issues you may encounter. Standard support covers typical software application issues such as bugs and incidents. Standard support will be available during business hours.

Premium support offers access to expertise for complex issues that may require specialised knowledge supporting application or infrastructure problems. Premium support can be tailored to the size and complexity of the installed system and the desired response time frames. Premium support also provides access to application specialists for minor additions or improvements.

## Technology requirements

Logsheets requires either an MPA server or a virtual or physical server, ideally with Windows Server 2019, as well as administrator access to the server to install the pre-requisite software and configure MPA for connection to your plant data.

You will also require an AVEVA PI historian with a PI AF (Asset Framework) server. If you do not have AF set up yet, Mipac can assist. For MPA to connect to AVEVA PI, the PSA (PI System Access) license is required. Mipac can support you with obtaining the license, or you can liaise directly with your AVEVA account manager.

Working with your IT group, Mipac will also require a service account to access the PI Data Archive and PI AF Server.

[mipac.com.au/products/  
mpa-logsheets](https://mipac.com.au/products/mpa-logsheets)  
Email: [sales@mipac.com.au](mailto:sales@mipac.com.au)  
Call: +61 7 3212 5600



# Case Study



**Client Name:**

Northern Star Resources Pogo



**Sector:**

Mining & Minerals

**Location:**

Alaska, United States of America

Northern Star Resources Pogo was using MS Excel to manually enter data for streams without instrumentation in over 10 plant areas. The manually entered data was being used daily by Metallurgists and Operators for process monitoring, inventory calculations and instrumentation validation.

**Northern Star Resources Pogo found the MS Excel-based logsheets:**

- would often fail and lose data,
- were time-consuming for operators and prone to errors,
- had poor version control leading to missing fields and incorrect targets,
- resulted in data lag with AVEVA PI uploads limited to a 24-hour frequency,
- had limited access control that compromised security and accessibility.

Northern Star Resources Pogo Operations implemented Mipac's Logsheets application that leveraged Pogo's existing AVEVA PI system for seven logsheets. Logsheets was used as the operator interface to capture operator observations, non-instrumented plant data and comments on actions taken in response to different situations.

Relevant instrumented data from the control system and LIMS was also displayed in the Logsheets to complement and compare against the operator-entered data. The AVEVA PI Asset Framework was used as the enabler to store the operator-entered information and display the instrumented data. The Logsheets were structured for data entry at pre-set and user-selectable timestamps.

**Once Logsheets was implemented at Pogo, they achieved the following benefits:**

- A single source of truth derived from a combination of real-time automated data and manually entered data for enhanced decision-making.
- Improved consistency and reliability of data.
- Key plant data is now readily available and accessible to view and share by a wider audience.
- A significant reduction in manual data entry and improved security of data. Version control is now sustained, eliminating multiple MS Excel versions which means updated data entry fields and targets are never compromised.
- The Metallurgy team now spend zero time maintaining the logsheet system but can readily resolve and extend the existing logsheets themselves when necessary.



# Logsheets Testimonials

“I tried to calculate the benefit based on percent improvement in time savings, but it is not possible to divide by zero! With Logsheets, we no longer spend ANY time maintaining our Logsheet system” **James Sweeney, Project Metallurgist, Northern Star Resources Limited, Pogo Operations, Alaska**

“Northern Star Resources Pogo worked with Mipac at Pogo on the digitization of the operator logsheets into the MPA system and are extremely pleased with the results. Mipac went above and beyond to accommodate specific feature requests that were not yet included into MPA and were very helpful in putting the vision of the logsheets to paper (pardon the pun). Mipac’s quick responses and attention to detail have made the roll-out seamless, saving time for operations and the met team on a daily basis, while also allowing for the plant data to now be live monitored by the team. The benefits from MPA were realized immediately.”

**Mark Pliska, Processing Manager,  
Northern Star Resources Limited, Pogo  
Operations, Alaska**

At Mipac, we go *beyond the solution!*

[mipac.com.au/products/  
mpa-logsheets](https://mipac.com.au/products/mpa-logsheets)

Brisbane Perth Vancouver  
E: [sales@mipac.com.au](mailto:sales@mipac.com.au)

P: +61 7 3212 5600



# How Logsheets compare

See how Logsheets compare with alternative solutions such as paper logsheets, Excel logsheets and PI Manual Logger.

Features	Logsheets	Paper logsheets	Excel logsheets	PI Manual Logger
<b>Purpose Built for Industrial Operations</b>				
<b>Capture manual information</b> Includes non-instrumented plant data, operator observations and comments on actions taken	✓	✓	✓	✓
<b>Purpose built for 24/7 operations</b> Purpose built for data entry and retrieval to suit industrial specific shifts and work patterns	✓	✓	✓	✗
<b>Plant context</b> Easily configured to match your current operation	✓	✓	✓	✗
<b>Leverage investments in other system</b> Data is stored directly in historian, reducing the risk of manual or temporary storage locations	✓	✗	✗	✓
<b>Usability</b>				
<b>Ease of use</b> Simple user interface that is familiar to operators.	✓	✓	✓	✗
<b>Concurrent use</b> The logsheets can be updated by multiple concurrent users	✓	✗	✗	✗
<b>Simple recall of historical logsheets</b> Easily navigate and view historical information in-app	✓	✗	✗	✗
<b>Edit history</b> Easily edit historical data where erroneous data was entered	✓	✗	✗	✗
<b>Flexible entry</b> Enter data before and after current time	✓	✓	✓	✗
<b>In-app data analysis</b> Compare manual and instrumented data	✓	✗	✗	✗
<b>Data export</b> Export data to csv to support ad-hoc analysis	✓	✗	—	✗

# How Logsheets compare

Features	Logsheets	Paper logsheets	Excel logsheets	PI Manual Logger
<b>Benefits of digitising logsheets</b>				
<b>Streamline data entry</b> Data is immediately stored and retrieved in your historian, minimising data duplication and manual transfer	✓	✗	✗	✓
<b>Real-time visibility</b> Real-time visibility for stakeholders across your system	✓	✗	✗	✓
<b>Generate new insights</b> Get early indications of instrument drift by overlaying instrumented data with manual checks	✓	✗	✗	✓
<b>Data validation</b> Minimise data entry errors through data validation	✓	✗	✓	✓
<b>Single version</b> Reduce maintenance of handling multiple files for different days and ensure the current logsheet version is used	✓	✗	✗	✓
<b>Automated data collection</b> Logsheets can show instrumented data alongside manually entered data	✓	✗	✗	✗
<b>Robust system</b> Minimise catastrophic failures that occur with macros or custom code	✓	—	—	—
<b>Unlimited users, unlimited logsheets</b> Annual site licence with unlimited users, unlimited logsheets	✓	—	✗	✓
<b>Support</b>				
<b>Industry experience</b> Industry experienced engineers support design, implementation and onboarding.	✓	✗	✗	✗
<b>Supported application</b> No in-house maintenance required. Vendor support available.	✓	—	✗	✗
<b>Quick implementation/ onboarding</b> Get started in as little as two weeks when performing a like-for-like replacement of Excel spreadsheets.	✓	—	—	✗

# Did you know?

## Logsheets FAQs

### Here are some of the most commonly asked questions about Logsheets:

#### How are manual data entry errors handled?

Logsheets include conditional formatting to alert the user when data outside the operating range is entered. Furthermore, users are warned prior to entering data outside the current shift.

#### Can Logsheets track operator comments?

Yes! Both operator name and comments can be captured and linked to specific data/variables. Additionally, MPA's time selector can be used to view historical operator comments.

#### How easy is it for the user to modify their Logsheets?

Mipac have a capability transfer philosophy. MPA utilises templates, making it simple to extend and evolve Logsheets as new areas or changes are introduced.

#### What's included with the logsheet application?

The logsheet application will give you access to as many logsheets as required for your asset. These logsheets can be used for operational, laboratory, or metallurgical purposes. Each logsheet can be tailored to meet your plant requirements.

#### How long does it take to implement Logsheets?

Our solutions can be implemented in as little as two weeks.

The implementation time frame of our solutions can vary depending on several factors, such as the complexity of logsheets and whether there is existing infrastructure in place. If a like-for-like implementation is required, such as moving from Excel to Logsheets, the implementation can take anywhere from two to four weeks once the base system is set up. However, if there is no existing logsheet or if the intent is to rework logsheets, which may include operator engagement workshops, the installation process can take a little longer, typically four to six weeks. Our solutions can be implemented within this time frame, but it is important to note that the exact duration will depend on the specific requirements of each project.

At Mipac, we go *beyond the solution!*

mipac.com.au/products/  
mpa-logsheets/  
Brisbane Perth Vancouver  
E: sales@mipac.com.au  
P: +61 7 3212 5600





We believe in working together  
with our clients and partners  
to achieve their goals.

At Mipac, we go  
*beyond the solution!*