

j5 Operations Management Software and OSIsoft® Event Frames: A Powerful Combination



What are OSIsoft Event Frames?

Events are important process or business time periods that represents something happening and impacting customer process or operations. Often customers want to analyze the OSIsoft PI System® data in the context of these events rather than by continuous time periods. Examples of different types of events include: asset downtime, process excursions, equipment start-ups and shut downs, environmental monitoring excursions, product tracking batches or paper

grades, operator shifts, or any other event type that has a start time and end time.

The PI System has a feature called Event Frames that capture critical event contexts for users. The Event Frames feature permits customers to capture a name, start time, end time, and a series of related information (event attributes) that are useful for analysis within the PI System.

The Powerful Combination of OSIsoft Event Frames and j5 Operations Management Software

PI Event Frames and their attributes can be synchronized to j5 Operations Management Software from a PI Asset Framework server and database. Attributes can also be updated in j5 and written back to the PI Asset Framework. PI Event Frames can also be locked and acknowledged from j5.

Using the j5 Integrated Development Environment (IDE), PI Event Frames and PI Asset Framework element templates can be converted into a **IndustraForm®** automatically. IndustraForm functionality such as Flags, Notes, Approvals, Conditional Visibility, Email Alerts and so on can therefore be integrated with PI Tags to provide a powerful combination of human process with real-time data providing better situational awareness across an industrial site.

Well 29 Goes OFFLINE 1

2 Event Frame Created in PI Asset Framework (AF)

3 Log Automatically Created in the j5 Operations Logbook

Category	Name	Value	Time Stamp
Real-time data	Bottomhole Pressure	6615.50393496431 psia	11/8/2017 11:50:00 AM
Real-time data	Casing Pressure	91.2492446899414 psia	11/8/2017 11:50:00 AM
Real-time data	Temperature	70 °F	10/12/2017 4:49:12.208
Real-time data	Gas Velocity	1.0483901701394423	11/8/2017 11:50:00 AM
Real-time data	Line Pressure	1366.7967423642 psia	11/8/2017 11:50:00 AM
Real-time data	Power Consumption	59.1809983701357 kW	11/8/2017 11:50:00 AM
Real-time data	Production Rate	691.728190286263 mscfd	11/8/2017 11:50:00 AM
Real-time data	Wellbore Pressure	1386.42769925996 psia	11/8/2017 11:50:00 AM
Real-time data	Temperature	10934671583089 °F	11/8/2017 11:50:00 AM
Real-time data	Wellbore Pressure	7.458333333333 d	11/8/2017 11:50:00 AM
Target	Well 29	1/1/1970 12:00:00 AM	1/1/1970 12:00:00 AM
Target	Production target	5000 mscfd	1/1/1970 12:00:00 AM
Temperature	Casing temperature	70 °F	10/12/2017 4:49:12
Temperature	Tubing temperature	58.0934671583089 °F	11/8/2017 11:50:00 AM
Time tracking	Avg 30d Downtime	200.857768856264 h	11/8/2017 11:50:00 AM
Status Message	Running		11/8/2017 10:41:00
Status Message	Down		11/8/2017 11:50:00
Status Message	Total Runtime		11/8/2017 11:50:00
Status Message	Offline		11/8/2017 11:50:00
Status Message	Running		11/8/2017 11:50:00

Event Time	Site	Section	Area	Category	Message	Status	Notes
Nov 8, 2017 11:52 AM	Wells	Clear Fork		Production	Well29 Downtime 2017-11-08 11:52:44	Open	
Nov 8, 2017 10:18 AM	Wells	Odessa		Production	Well17 Downtime 2017-11-08 10:18:00	Closed	
Oct 17, 2017 11:51 PM	Power Generation	Generation	Area 50	Maintenance	Changed filter elements on 104 L small benfield filter.	Closed	
Oct 16, 2017 7:48 AM	Power Generation			Environment	High Opacity reading on the CEMS This is probably caused by the recalibration taking place at the moment	Closed	
Oct 16, 2017 7:47 AM	Power Generation	Transmission		Lab	Took DHC S/D sample to the lab	Open	
Oct 15, 2017 6:03 AM	Power Generation	Transmission		Maintenance	Alignment incomplete, Maintenance suspend work due to soft leg on motor.	Open	
Oct 16, 2017 3:51 AM	Power Generation	Transmission		Maintenance	Backwashed MMF #1 backwash did not get a good air scour Going to do another backwash when complete.	Closed	
Oct 16, 2017 3:40 AM	Power Generation	Generation		Maintenance	Locked out BFP 1 for Ron Wilson to inspect seal. Training Test Entry for Power Block Operator.	Open	
Oct 16, 2017 2:46 AM	Wells	Odessa		Lab	Effluent Discharge measurements complete	Open	

Well29 Downtime 2017-11-08 11:52:44

General Child Event Frames Referenced Elements Attributes

Name: Well29 Downtime 2017-11-08 11:52:44

Description:

Template: Well Downtime

Start time: 11/8/2017 11:52:44.635 AM

Categories:

Extended Properties (0) Annotations (0) Security

Find: Parents Children

Actions: Capture Values Link Acknowledge

Event Data

Refresh Data

Name	Well29 Downtime 2017-11-08 11:52:44		
Description			
Start Time	Wed 8, 11:52 AM	End Time	
Duration	129.79	Severity	None
Downtime Reason	Faulted	Status	Faulted

Bottom Hole Pressure	6615.50		6615.5	Power Consumption	50.18		50.2
Casing Pressure	91.25		91.2	Production Rate	681.73		681.7
Gas Gravity	1.05		1.0	Tubing Pressure	1186.43		1,186.4
Line Pressure	1366.80		1,366.8	Tubing Temperature	58.09		58.1

Initial Analysis

Requires on-site inspection

Inspection Required

Add a note or flag

Submit

In This Case the User Reviews the Information Available and Decides That They Requires a Field Operator to Do a Visual Inspection



This Brings up the Inspection IndustraForm for That Piece of Equipment

Nicholas Hurley Nov 8, 2017 11:56 AM SUBMISSION

Add a note or flag

Nicholas Hurley SUBMITTED Revise

Well Inspection

Visual Inspection

Is the location free of oil/gas/saltwater leaks?	Yes	No	N/A	Is the annulus between the surface and production casing sealed?	Yes	No	N/A
Is the annulus free from escaping gas or fluid?	Yes	No	N/A	Is down hole free from escaping gas or fluid?	Yes	No	N/A
Is there any evidence of groundwater contamination?	Yes	No	N/A				

Manual Measurements

Casing temperature	<input type="text"/>	Oil outlet temperature	<input type="text"/>	Emulsion inlet temperature	<input type="text"/>
Plant inlet separator pressure	<input type="text"/>	Downstream meter tap pressure	<input type="text"/>	Meter upstream pressure	<input type="text"/>

Additional Observations

Add a note or flag

Submit

Event Frame Attributes Available in j5 IndustraForm, j5 Allows Users to Build Procedures and Processes on Top of the Events Generated in PI AF



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Server Admin - Configuration - Operations - Event Manager - Dashboards - Documentation - Search

admin (Administrator)

Operations Logbook > Well29 Downtime 2017-11-08 11:52:44

Detail Well Downtime with inspection Notes

Initial Analysis Export PDF

REVIEWER Nicholas Hurley INSPECTOR Nicholas Hurley APPROVER Nicholas Hurley

Well29 Downtime 2017-11-08 11:52:44

General Child Event Frames Referenced Elements Attributes

Filter

Name	Value
Category: <None>	
Downtime Reason	Faulted
Duration	138.641250610352 s
Gas Gravity	1.04839017013944 kg/L
Production Rate	681.728190268263 mscfd
Status	Faulted
TestAttribute	0
Category: Power Consumption	
Power Consumption	50.1809983701357 kW
Category: Pressure	
Bottom Hole Pressure	6615.50393496431 psi
Casing Pressure	91.2492446899414 psi
Line Pressure	1366.7967423642 psia
Tubing Pressure	1186.42769925596 psi
Category: Temperature	
Tubing temperature	58.0934671583089 °F

Operations Logbook

Well Inspection Not Yet Started

Visual Inspection

Is the location free of oil/gas/saltwater leaks? Yes No N/A

Is the annulus between the surface and production casing sealed? Yes No N/A

Is the annulus free from escaping gas or fluid? Yes No N/A

Is down hole free from escaping gas or fluid? Yes No N/A

Is there any evidence of groundwater contamination? Yes No N/A

Manual Measurements

Casing temperature

Oil outlet temperature

Emulsion inlet temperature

Event Data Submitted Nov 8, 2017 11:50 AM - Nicholas Hurley

General

Downtime Reason	Down
Duration	1500.00
Gas Gravity	0.93
Production Rate	885.11
Status	Down

Power Consumption

Power Consumption	60.84
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Pressure

Bottom Hole Pressure	4947.71
Casing Pressure	68.90
Line Pressure	1367.79



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Log Automatically Created in the j5 Operations Logbook

Well Inspection

Visual Inspection

Is the location free of oil/gas/saltwater leaks? Yes No N/A

Is the annulus between the surface and production casing sealed? Yes No N/A

Is the annulus free from escaping gas or fluid? Yes No N/A

Is down hole free from escaping gas or fluid? Yes No N/A

Is there any evidence of groundwater contamination? Yes No N/A

Manual Measurements

Casing temperature: 23 Oil outlet temperature: 70 Emulsion inlet temperature: 77

Plant inlet separator pressure: 7 Downstream meter tap pressure: 112 Meter upstream pressure: 114

Additional Observations: Machine turned back on, no issues noted.

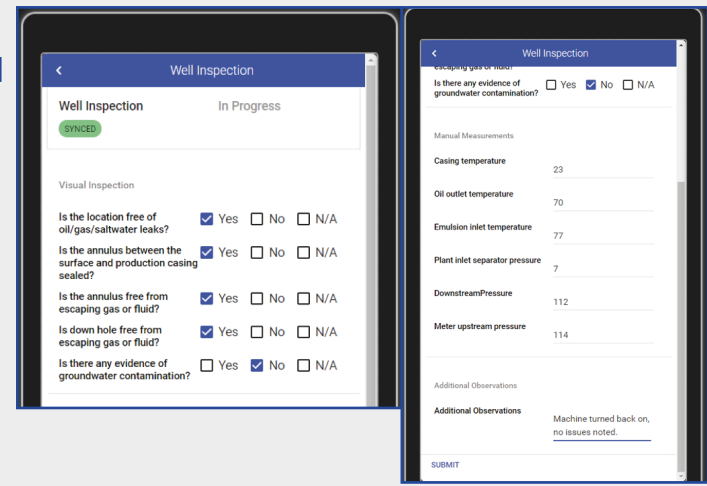
Add a note or flag Submit

That Information Is Automatically Synced Back to the Desktop Version of the IndustriaForm, so the Operator in the Control Room Can Have Visibility of the Information from the Field Without the Need for Radio Calls or Waiting for the Field Operator to Return

Which Can Be Completed on a Mobile Device out in the Field Using the j5 Mobile Application

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Data Collected Can Also Be Written Back to PI Points or PI AF Attributes

If the Device Needs to Be Used in Offline Mode, Then the Data Will Sync When the Field Operator Returns to the Network Area

		Casing temperature	70 °F	10/12/2017 4:49:12.208...
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Corrective Actions

Responsible Person	Action	Due Date	Completed	Comments
Andrew Bateman	Raise work order to do corrective maintenance on Well	Thu 9, 12:01 PM	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	
-			<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	

Confirm all actions completed and issue is resolved: Yes No N/A

Add a note or flag Submit Approver Approve Reject

The Final Part of This Example Workflow Is Adding Corrective Actions to Resolve the Issue (This Could Be Adjusted to Fit Any Process and Different Processes and IndustriaForms Can Be Lined with Different Event Frames)

THE ONLY OPERATIONS MANAGEMENT PLATFORM WITH SPREADSHEET CONFIGURABILITY AND ENTERPRISE SCALABILITY

Contact j5 International (Part of Hexagon) for more information
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