

A photograph of an oil pumpjack in silhouette against a sunset sky. The sun is low on the horizon, creating a warm orange and yellow glow. The pumpjack's long arm and counterweight are prominent. In the background, other industrial structures and power lines are visible.

INDUSTRY SOLUTION

A large teal triangle graphic that serves as a background for the AVEVA logo.

AVEVA™

INTELATRAC MOBILE OPERATOR ROUNDS FOR UPSTREAM OIL & GAS

Upstream Oil & Gas Applications for
IntelaTrac Mobile Operator Rounds

Wonderware® IntelaTrac Mobile Operator Rounds™ enables Upstream Oil & Gas producers to achieve reliable, safe and profitable operations through the consistent execution of all field tasks. IntelaTrac Mobile Operator Rounds fosters a culture of asset stewardship and accountability through a standardized approach to work force management.



Business Value

- Provides a framework for driving sustainable operational excellence
- Enforces consistent execution of best practices
- Provides a costeffective strategy for monitoring remote, noninstrumented assets
- Key success factor for equipment reliability
- Immediately guides new field workers in best practices

Industry Challenges

- Safety and regulatory compliance
- Accurate production data
- Unscheduled downtime
- Controlling maintenance costs
- Personnel turnover and training costs
- Inefficient paper-based data collection

IntelaTrac Mobile Operator Rounds Mobile Solutions Deliver

Better safety and regulatory compliance through:

- Enforcement of approved operating and safety procedures
- Validated location tracking which helps ensure that required checks have been performed
- Documentation of safety and regulatory related inspections and activities

More accurate production data through:

- Electronic data collection and validation
- Automatic data transfer to production accounting applications

Less downtime and reduced maintenance costs through:

- Consistent enforcement of accepted equipment and process operating and maintenance procedures
- Early detection of equipment degradation based on approved criteria
- Field execution of approved contingency procedures automatically triggered by “as found” conditions—helping eliminate costly secondary damage and lost production

Improved knowledge transfer and reduced employee training costs:

- Capture of institutionalized best practices from experienced field workers
- Immediate guidance and additional reference information availability when a problem is detected
- The ability to create step-by-step procedures as part of on the job training

Improved field worker efficiency through:

- Elimination of slow, less accurate, paper-based data collection
- Immediate filtering of manually collected data to minimize data entry errors
- On-board guidance and attached documentation – reduces trips back to the office

Tailored solution through:

- IntelaTrac Mobile Operator Rounds Oil & Gas module that provides standard AGA and other industry calculations for more accurate production data collection
- Tieto Energy Components (EC) integration – enabling IntelaTrac Mobile Operator Rounds to act as a mobile platform for this popular production accounting application



Upstream Oil & Gas Applications for Intelatrac Mobile Operator Rounds

Oil & Gas production fields are often in remote locations. Offshore production platforms are even more challenging environments. Intelatrac Mobile Operator Rounds helps ensure that the field workers conduct operator rounds, inspections and reliability checks in a thorough and fully verifiable manner. Intelatrac Mobile Operator Rounds helps deliver the data you need to keep your assets productive and operating at peak efficiency. Your field workers benefit since they have more information at their fingertips and no more entering data into spreadsheets. Intelatrac Mobile Operator Rounds even helps field workers respond more consistently and effectively to field issues through predefined follow-up actions triggered automatically by current operating conditions.

Operator Rounds

Intelatrac Mobile Operator Rounds's Procedure Manager allows experienced field personnel, not programmers, to create operator rounds and inspections. Intelatrac Mobile Operator Rounds can:

- Accelerate the execution of Standard Work Procedures (SWP) with time, date, location and operator verification
- Gather important operating data such as temperatures, pressures, flow rates, lube oil levels, and bearing vibration
- Detect off-nominal operating conditions and provide directed advice messaging to field workers
- Collect production totals, aggregate them and transfer them to your production accounting system—improving accuracy and timeliness

Inspections

To maintain the highest possible production you need accurate and timely data from your equipment and process. Intelatrac Mobile Operator Rounds is the ideal tool for your field inspection needs. Intelatrac Mobile Operator Rounds can facilitate:

- Critical and auxiliary equipment inspections
- Inspections of wells and their support facilities
- Safety inspections
- Environmental inspections

Operator Driven Reliability (ODR)

Intelatrac Mobile Operator Rounds provides a powerful tool for implementing an ODR program. Multi-trade field workers equipped with Mobile Intelatrac Mobile Operator Rounds can capture:

- Bearing vibration and temperature readings
- Differential seal pressures (seal leak detection)
- Lube oil samples (documentation/validation)
- Preventive Maintenance (PMs) tasks on all types of well and production equipment

Equipment Startups / Shutdowns

Intelatrac Mobile Operator Rounds can help field workers properly start up or shutdown well equipment or processes. With Intelatrac Mobile Operator Rounds you can:

- Enforce sequencing of work tasks with location verification
- Provide field access to digital copies of equipment drawings and procedures
- Collect field data and records of all field steps
- Deliver web based management reports



Upstream Oil & Gas Module

Production tracking is a key issue and involves complex calculations for accurate results. The IntelTrac Mobile Operator Rounds Oil & Gas Module helps mobile workers capture accurate production totals. In addition, IntelTrac Mobile Operator Rounds's enforcement of best practices and operator-driven reliability capabilities makes delivers a powerful mobile solution for today's energy producers—either on land or out at sea. With the IntelTrac Mobile Operator Rounds Upstream Oil & Gas Module, you receive:

Integration of Production Data: tags production data and helps ensure the proper aggregation of individual well totals.

Production Data Calculation Function: new function used to totalize all production data for a given day for a specific area (oil field) or storage tank (gas). This saves valuable field worker time and improves data accuracy.

“Round Chart” to Absolute Pressure Calculation Function: new function used to convert gas measurements from “round charts” to a volume.

AGA 3 Calculation Function: gas industry standard calculation for converting raw gas readings to gas volume (American Gas Association's Report no. 3 “Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluid”).

Tank Volume Calculation Functions: functions for automatically calculating the volume of common tank or vessel types including: Bullet, Cylindrical, Spherical and Ellipsoidal vessels.

Integration

IntelTrac Mobile Operator Rounds provides a mobile framework which can deliver a “mobile” capability to many plant systems such as historians, CMMS/EAM systems and others. Procedures can be automatically created by these plant systems using the IntelTrac Mobile Operator Rounds Extensibility Software Development Kit (SDK). Now you can deliver information collected by mobile workers directly to most plant systems and extend the application to meet changing requirements.

Historians: OSIsoft® PI Historian, Honeywell® PHD, AspenTech® IP21, Wonderware Historian. Use the IntelTrac Mobile Operator Rounds mobile framework to “mobilize” your plant historian. Stranded asset data collected by Mobile IntelTrac Mobile Operator Rounds can be easily added to your historian's data record. Now you have a complete view of all of your plant's assets.

CMMS/EAM Systems: Avantis®, SAP® PM, IBM® Maximo. IntelTrac Mobile Operator Rounds can generate work requests and communicate these back to the CMMS/EAM system — saving time and effort by field operators and getting problems fixed faster.

Wonderware System Platform: IntelTrac Mobile Operator Rounds can exchange data with Wonderware System Platform; delivering stranded asset data to a System Platform application or receiving historical data for field viewable trends.

IntelTrac Mobile Operator Rounds System Overview

IntelTrac Mobile Operator Rounds is an enterprise-level software and hardware solution that delivers mobile workforce management to the Oil & Gas industry.

Server Components and Integration Software

IntelTrac Mobile Operator Rounds Database Server: Microsoft® SQL Server-based database management server.

IntelTrac Mobile Operator Rounds Application Server: Integration server (synchronization, scheduling and extensibility).

IntelTrac Mobile Operator Rounds Report Server

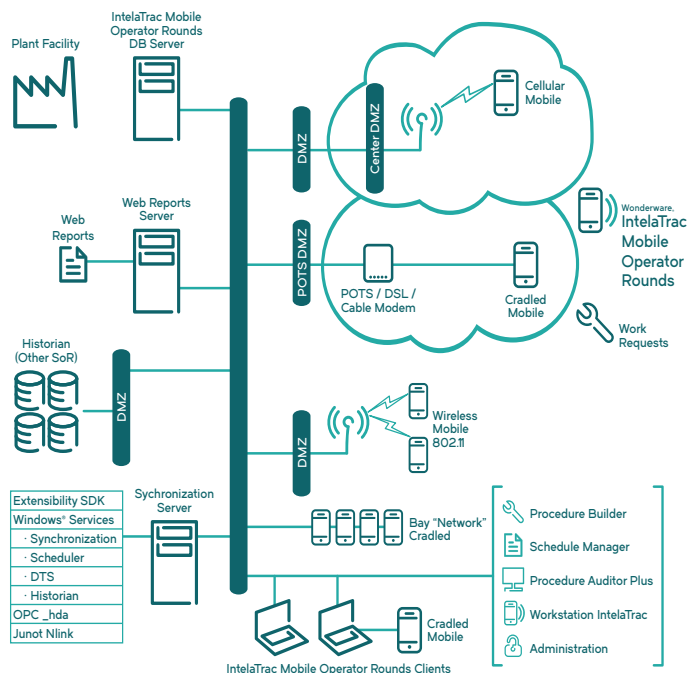
Integration Modules: Wonderware System Platform, Wonderware Historian, InFusion™ Control and Foundation Editions, Avantis, SAP PM, IBM Maximo, OSIsoft PI System, AspenTech IP21, and others.

Desktop Intelatrac Mobile Operator Rounds Clients

Intelatrac Mobile Operator Rounds Management Center (IMC): Hosts the individual Intelatrac Mobile Operator Rounds application components used for content creation and management (Procedure Builder), scheduling (Schedule Manager), review & approval (Auditor Plus) as well as the Administration & Security application components. The Web Reports application is also accessed from the IMC.

Workstation Intelatrac Mobile Operator Rounds: Desktop procedure execution interface similar to Mobile Intelatrac Mobile Operator Rounds.

Intelatrac Mobile Operator Rounds System Architecture



Mobile Intelatrac Mobile Operator Rounds Client

Mobile Intelatrac Mobile Operator Rounds: Windows Mobile client that provides a "best in class" browser style user interface for procedures and data collection tasks on specialized mobile devices.

Mobile Intelatrac Mobile Operator Rounds for Android: Includes a full featured modernized user interface for procedures and data collection tasks as well as visual feedback via context sensitive displays on tablet devices.

Mobile Intelatrac Mobile Operator Rounds for Windows 10: Windows 10 client that features a modernized user interface for procedures and data collection tasks as well as visual feedback via context sensitive displays on tablet devices.

Mobile Devices and Peripherals

Mobile Intelatrac Mobile Operator Rounds: Supports a broad selection of Windows Mobile based handheld computers from Motorola/ Symbol, Intermec, Bartec, and others. Supported peripherals include: RFID and barcode readers, vibration probes, temperature guns, and wireless communication devices.

Mobile Intelatrac Mobile Operator Rounds for Android: Supports commercially available Android phones and tablets as well as specialized rugged devices from Bartec, ECOM, Intermec, and others.

Mobile Intelatrac Mobile Operator Rounds for Windows 10: Supports commercially available Windows 10 tablets such as the Windows Surface Pro, as well as specialized rugged devices from Bartec, ECOM, Panasonic and others.

For more information on Wonderware Intelatrac Mobile Operator Rounds, please contact your local Wonderware distributor, or visit: <https://sw.aveva.com/asset-performance/asset-maintenance/mobile-operator-rounds>

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