

# Smart, Cybersecure Power Supply Upgrade Protects Upstream Uptime for Oxy

*Primary and uninterruptible power supplies (UPS) from Bedrock Automation represent the next generation of industrial power*

BOSTON, MASS, USA, January 26, 2022 /EINPresswire.com/ -- Bedrock Automation has completed a power supply upgrade to protect operations at two Occidental Petroleum well pads from environmental and cyber disruption. The upgrade includes primary and back up power supplies that feature high-performance processing, advanced communications and built-in cyber security.



Secure, standalone primary power supply (SPS.500) and secure industrial UPS (UPS.500) from Bedrock Automation

“If you’re not pumping oil, you’re not making money. If your backup power goes down, it could take a couple of days to get things back up and running, but you never regain that lost production. If you are producing hundreds of barrels a day and going down a few times a month, multiply that downtime by the price of oil and you’ll see it add up pretty fast,” said Ron Moore, electrical lead for Occidental Petroleum engineering team.

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Occidental Petroleum*

The Bedrock OSA Power units have replaced an internally developed electrical power system that had powered well pad PLCs. Normal temperature cycling and exposure to caliche dust were contributing to disruptive power trips and conflicting alerts from the legacy lead acid power supplies.

Powering the future

Rather than replace the failing units with more of the same, the Occidental engineering team wanted a system that would take them into the future. After evaluating several options, they concluded that the combination of Bedrock Automation's [secure power supply](#) (SPS.500) and [industrial UPS](#) (UPS.500) would fulfill their vision of a next generation power solution.



The SPS.500 provides single or redundant supply, using 90-264 Vac main voltage, 50/60 Hz input and is fully certified for use in Class 1, Division 2 locations. Its output of up to 500 watts is software-configurable between 21 to 28 volts. Multiple systems can be daisy-chained to scale up for higher power requirements.

The UPS.500 provides 24 Vdc at 12 Ah of power for hours of consistent backup for a typical PLC or DCS control cabinet. An onboard secure microcontroller controls the Li-Ion battery cell-by-cell, augmenting the high density, rapid charging, extreme temperature tolerance and the extended life that characterizes Li-Ion technology. The Li-Ion technology also recharges 10 times faster than a conventional lead acid battery system. The UPS.500 also has extremely high energy density and a compact footprint.

Both the SPS.500 and UPS.500 are well equipped to handle desert conditions. They are rugged, shock and vibration proof, and designed for use in temperatures between -40° F to +176 °F. They are encased in a sealed aluminum housing and compliant with IP67 and NEMA 4X standards for resistance to water, ice, oil and dust. Both are also MIL-STD 461 certified for EMP resistance without secondary containment.

From a cyber security perspective, the onboard electronics of the SPS.500 and UPS.500 enable Bedrock's patented ICS cyber security. This initiates transparently and instantly upon startup to manage a deep authentication process and protect the power to Occidental's hardware, firmware, software and communication throughout its entire lifecycle.

With the secure onboard microcontroller also comes secure 10/100 Mbit Ethernet IPv4 and IPv6 communications and support for Secure Sockets Layer (SSL) Embedded Web Server and embedded IEC 62541 – OPC Unified Architecture Server. Bi-directional communications enable control, diagnostics and status reporting. More than 35 diagnostic variables can be easily monitored, trended, alarmed and historicized via SCADA.

The Occidental Petroleum configuration has been running flawlessly at both locations since 2019 and Occidental is now fully equipped with features that will ensure continued trouble free operation over the coming years.

For more details, [download the case study here](#).

#### About Bedrock Automation

Bedrock Automation, established in San Jose, California and now based in the Boston, Massachusetts area, has developed the world's most powerful and cyber secure automation platforms. Bedrock has assembled the latest technologies and talents from the automation, measurement, cyber security, and semiconductor industries to build unprecedented solutions for ICS, Power and Flow-based on three prime directives: simplicity, scalability, and security. The result is its award-winning Open Secure Automation (OSA®) platforms, which provide deeply embedded ICS cyber security and the highest levels of performance and reliability, at the lowest lifecycle costs.

For more information about Bedrock Automation, visit [Bedrock Automation](#).

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