

## What's new in artificial lift

**Excerpts From: Part 2—Fourteen new downhole/surface system developments from 10 companies for electrical submersible pumping and other artificial lift operations.**

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Part 1, presented last month, covered 15 recent developments in three categories of artificial lift technology: beam and progressing cavity pumping (PCP) and plunger lift.

This concluding article introduces 14 new developments from 10 companies. Eight of the presentations include new downhole and surface equipment for ESP systems. The remaining six items cover miscellaneous contributions for new downhole pumps, operations monitoring/control and soap stick launching.

**Improved water-cut meter.** eProduction Solutions, Inc., Kingwood, Texas, a Weatherford International Ltd. company, recently introduced its new **Red Eye 2G** water-cut meter, combining the latest in optical sensing technology with the company's field experience in high water-cut measurement, Fig. 10. The new design offers the latest in instrumentation for accurate phase fraction measurement.

The original Red Eye (1G) water-cut meter measures the oil in a mixture of oil/water by passing a beam of infrared light through the stream that is absorbed by oil but not water. It was designed for high water-cut measurements, and its performance in that condition stands unmatched. Red Eye 2G extends performance to wide-range measurements (low to high water cut) by simultaneously measuring multiple infrared frequencies. Both meters operate independent of water salinity, and the 2G also has low sensitivity to entrained free gas.

From an operations standpoint, this new-generation meter features simplified calibrations, lower cost installation, and an improved user interface. The electronics are mounted directly to the measurement probe so there is no field wiring other than power and output signal cable. The new meter's configuration software can run on a PC or hand-held PDA. The NOC (net oil computer) module can include a local keypad/display interface and/or a wireless link to a hand-held PDA for the ultimate in operator convenience.



**Fig. 10. Second-generation water-cut meter.**

*See the May 2005 edition of World Oil for the complete "What's new in artificial lift" article.*