

PDMS

Permanent Downhole Monitoring System

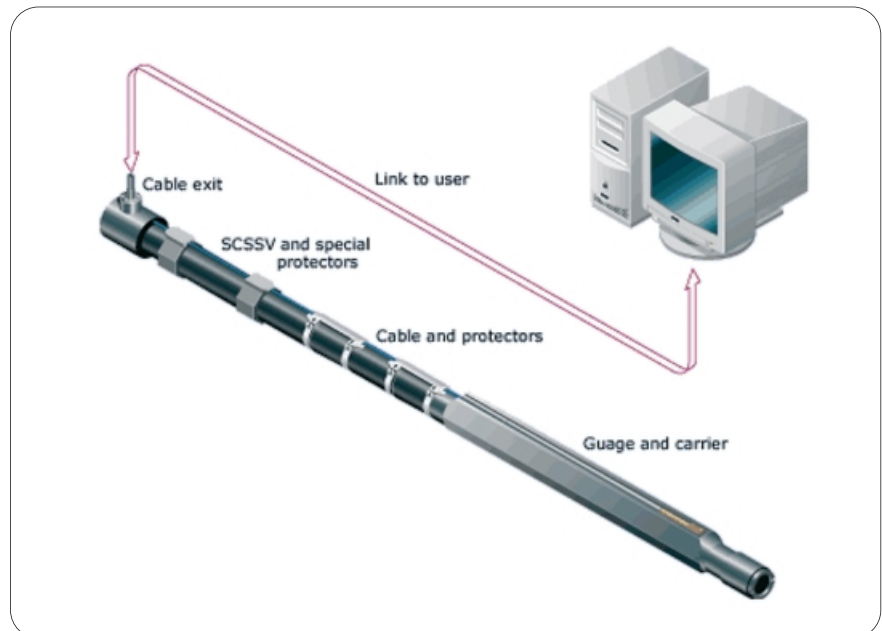
Since 1987 Roxar's permanent downhole monitoring system (PDMS™) has supplied well and reservoir data to leading oil companies. PDMS provides reliable around-the-clock access to downhole information from any office location; improving reservoir management, well planning and resource exploitation. Our track record proves that PDMS is robust and reliable. Roxar systems are engineered and customized in-house, so we offer a fast turnaround between client decision and installation. Permanently installed downhole monitoring provides simple, cost-effective and intervention-free reservoir surveillance – continuously.

PDMS is deployed in production, injection and observation wells, and used in conjunction with monitoring of multizone reservoirs and multilateral wells. PDMS may also be integrated with other devices, such as downhole flow control valves, for complete intelligent well applications.

PDMS features

- Permanent gauge
- Gauge carrier
- Downhole cable
- Cable protectors
- Electrical connectors
- Wellhead pressure barrier
- Interface and communication
- DACQUS®

PDMS can be supplied as a stand-alone system or as a complete integrated system. Available in numerous configurations, the Roxar PDMS typically provides information on reservoir pressure and temperature. However, measurements such as flow rate, fluid fraction, sand detection and chemical properties add value to the system. In cooperation with partners Roxar also provides complete downhole instrumentation for permanent seismic monitoring, in conjunction with both 4-D surveillance and microseismic activity.



INTERPRETATION



MODELING



SIMULATION



WELL & COMPLETION



PRODUCTION & PROCESS



Specifications

Main interface specifications and capabilities

DACQUS® – for reservoir data acquisition and management. This Windows-based surface monitoring system comes in various configurations from comprehensive and network operated systems for offshore platforms, to solar powered single well units with GSM data transfer to office.

Permanent downhole gauge – for monitoring of reservoir and well data. Complete with quartz pressure and temperature sensors, logic section, electronics and cable head, this is the source for reservoir to surface information. As a retrievable unit, the gauge is also equipped with a well proven electrical wet connector. The fully hybridized electronics allow extended monitoring at very high temperatures.

Gauge carrier – for holding and protecting the gauge in the well. As an integrated part of the production tubing the gauge carrier is customized to each individual application, both with respect to metal alloys, sizes, and gauge configurations. With a retrievable gauge the carrier is replaced by a side pocket mandrel.

Downhole cable – for gauge power and signal transfer. Delivered to suit client requirements, cables are provided in high-alloy metal finish for various pressure ratings. The copper conductors are securely centered, and a suitable and cost-effective encapsulation provides added protection. The cables can be further protected by use of associated bumper wires. Unspliced continuous lengths of more than 10,000m (30,000ft) are available.

Cable protectors – for downhole cables and control lines. Provided in numerous designs, sizes and configurations, the protectors are made as cross-coupling and snap-on units for fast and safe installation. Special protectors are customized for completion variables such as the downhole safety valve and side pocket mandrels.

Wellhead pressure barrier – for well security and cable termination. These are made to fit all platform Xmas trees from leading vendors, and they are certified for use in hazardous area – Classified Zone (Red).

Subsea electrical connector – for subsea tubing hanger and Xmas tree. This single conductor, wet-mateable connector secures signal transfer from well to subsea control module. Designed and tested for multiple and vertical matings, this connector is the best application for traditional subsea trees as well as for vertical subsea data logging units. Connectors for horizontal trees are manufactured by specialist companies, and Roxar personnel are certified to install and test these on site.

Connectors and splices – for electrical cables and hydraulic control lines. The new Roxar connectors and splices provide a faster and safer installation of monitoring systems where breaks and feed-throughs are required by the completion configuration or by operational events.

For further information please contact your regional office or email: info@roxar.com or visit www.roxar.com

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