

Acoustic Telemetry System - FACT



Description

The PTS FACT System provides real time acoustic telemetry and wireless communication of pressure and temperature data acquired during the DST to be transmitted to the surface, allowing the monitoring of bottom hole pressures during buildup and draw-down periods.

The FACT system comprises 5 main components:

- The ACT is an Acoustic Carrier Tool that houses 4 "Talking Gages," the RTAG Real Time Acoustic Gages. The ACT is incorporated into the DST string below the PTS AOTV and can be configured to allow monitoring of either annulus or tubing pressure with each RTAG.

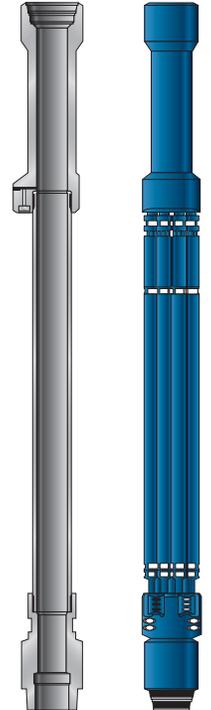
- The ART is an Acoustic Repeater Tool that provides dual Acoustic Processors (AP's) which listen for the RTAG's, amplifies and then repeats the signal along the DST string. Multiple ART's are positioned along the drill string to counter signal attenuation and to provide redundancy in the system.

- The D-SUB, Downhole Sub incorporates the ART electronics into the subsea landing string and provides an interface for the hardwired cable interface to the surface data acquisition unit. The cable interface is included within the PTS MODUTree® Umbilical. An ART is run below the MODUTree® to ensure signal amplitude is maintained through the MODUTree® assembly.

- The WIN, Wireline Interface Node provides a wireline interface for direct communication with the ACT. This provides a back-up means of uplink of the DST data during the operation.

- The RTAG is a Quartz based Acoustic Telemetry "Talking Gauge". Data is sampled to memory and transmitted acoustically through the DST test string to the D-SUB and then through the cabled interface to the surface data acquisition unit. Up to 8 RTAG's in 2 ACT's, can be utilized in a single system. All data is logged into the gage memory section, allowing full data recovery at surface, should the system have down hole communication failure. In addition the RTAG can communicate directly with the WIN.

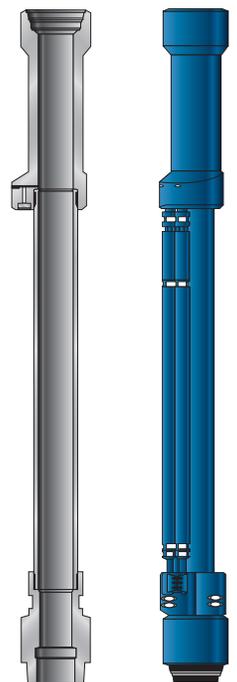
The system can be configured either as a FACT System or as a simplified WIN/DAQ system where the WIN is run on wireline for monitoring and download of the data from the RTAG's.



ACT With 4 RTAGs

Operating Specification

NOMINAL TOOL SIZE	OD	5.375 in.
	ID	2.25 in.
	Length	12.75 ft. ACT. 15.25 ft. ART
TEMPERATURE RATING	Standard	350° F
	Optional	400° F
PRESSURE RATING	Max. Differential	15,000 psi
	Max. Absolute	20,000 psi
SERVICE	H2S, CO2, Acid	



ART with Dual APS