Force Gauge

Application

The real-time downhole force tool measures internal and external pressure, temperature, and tubing strain. Downhole force estimates and models can be incorrect. The only way to know for sure is to measure the combined loading of your completion using a real-time force gauge. Measure your tubing stress and avoid catastrophic completion failures. Enhanced oil recovery methods can have significant thermal differentials. Fluid frac pressures, extra long strings, perforation events, high temperature and high pressure. There's alot going on that is unknown and not measured. Thermal cycles have the capacity of unloading or overloading pre-stressed completion assemblies. The Completion Force Gauge allows operators to monitor and track the downhole forces in real-time for the life of the completion.

Benefits

Fully welded construction with pressure-testable, metal-to-metal, redundant cablehead design. Digital piezoelectric pressure gauge technology compensates the axial strain data against internal and external pressure changes. The internal resistive thermal device compensates the strain data against thermal changes, delivering pure compression and tension strain data. Custom Connections and Sizes Available.

Features

- Downhole Tension and Compression
- Downhole Internal and External Pressure
- Downhole Internal and External Temperature
- Real Time Data

Completion Force Gauge

OD	ID	Pressure	Part No.
7.25"	4.548"	15,000 psi	111917

Specifications

	Pressure	Temperature
Accuracy	0.05% F.S.	0.5°C
Resolution	0.0003% F.S.	0.005°C
Drift	< 3 psi/year	< 0.1°C/year
Compression and Tension		
Range	+/- 50,000 lbs	
Accuracy	1-5% F.S.	
Sampling	10 Hz Sensor Sampling Max Taken 1 Hz Transmission	