

Combined Caliper and Video (CalVid)

The CalVid system combines the accuracy of an electronic multifinger caliper with the visual images of a downhole video camera, resulting in a more accurate representation of wellbore conditions.

Caliper tools give accurate measurements of the well bore diameter at the exact arm location, but no feel for the general wellbore condition where the arms are not in contact. A camera gives a good visual representation of the condition of the entire wellbore and in the easiest format to interpret – a picture, but with no measurements. Expro's combined caliper and video string (CalVid) allows wellbores to be measured and visualised at the same time, giving operators a full understanding of the wellbore.

Critical decisions regarding well integrity can now be made based on a complete and accurate assessment of the entire wellbore.

Applications

- Casing / tubing integrity monitoring
- Identification and assessment of casing / tubing wear
- Investigation into mechanical anomalies or damage
- Leak detection

Features and benefits

- Real time Surface Read Out (SRO)
- Camera image qualifies data from caliper
- Accurate measurement of casing / tubing IDs
- Camera allows assessment of area below the toolstring that the caliper cannot measure
- Video and caliper data from a single tool deployment



Technical specifications		
Caliper	Multifinger caliper, 40F	
Radial resolution	0.005" (0.127mm)	
Radial accuracy	0.03" (0.762mm)	
Inclinometer accuracy	5 degrees rotation and deviation	
Finger contact force	0.75 to 1.25 lbs (0.34 to 0.57 kg)	
Maximum pressure	15,000 psi (103MPa)	
Maximum temperature	350°F (177°C)	
Diameter	2.75" (70mm)	
Length	66" (1.68m)	
Weight	62 lbs (28kg)	
Measurement range	3 to 7.5" (76 to 190mm)	
Vertical resolution @ 30ft/min	0.146" (3.71mm)	
Camera	Standard	High temperature
Tool O.D.	1 11/16" (43mm)	2 1/8" (54mm)
Maximum temperature	225°F (107°C)	350°F (177°C)
Maximum pressure	10,000 psi (69 MPa)	10,000 psi (69 MPa)
Tool length	102" (2.59m)	140" (3.56m)
Tool Weight	31 lbs (14kg)	65 lbs (30kg)

Expro's CalVid software package allows visualisation of these complementary data-streams by integrating the digital caliper data with multiple frames from the camera. This ensures that both data-streams can be fully utilised.

