

Combined Caliper and Video (CalVid)

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

Expro's 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.

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 fuller understanding of the wellbore.

Critical decisions regarding the 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

Benefits:

- Real time (SRO) results for faster diagnosis
- Camera image qualifies date from caliper
- Accurate measurement of casing / tubing ID's
- Camera allows assessment of area below the toolstring that the caliper cannot measure
- Video and caliper data from a single tool deployment



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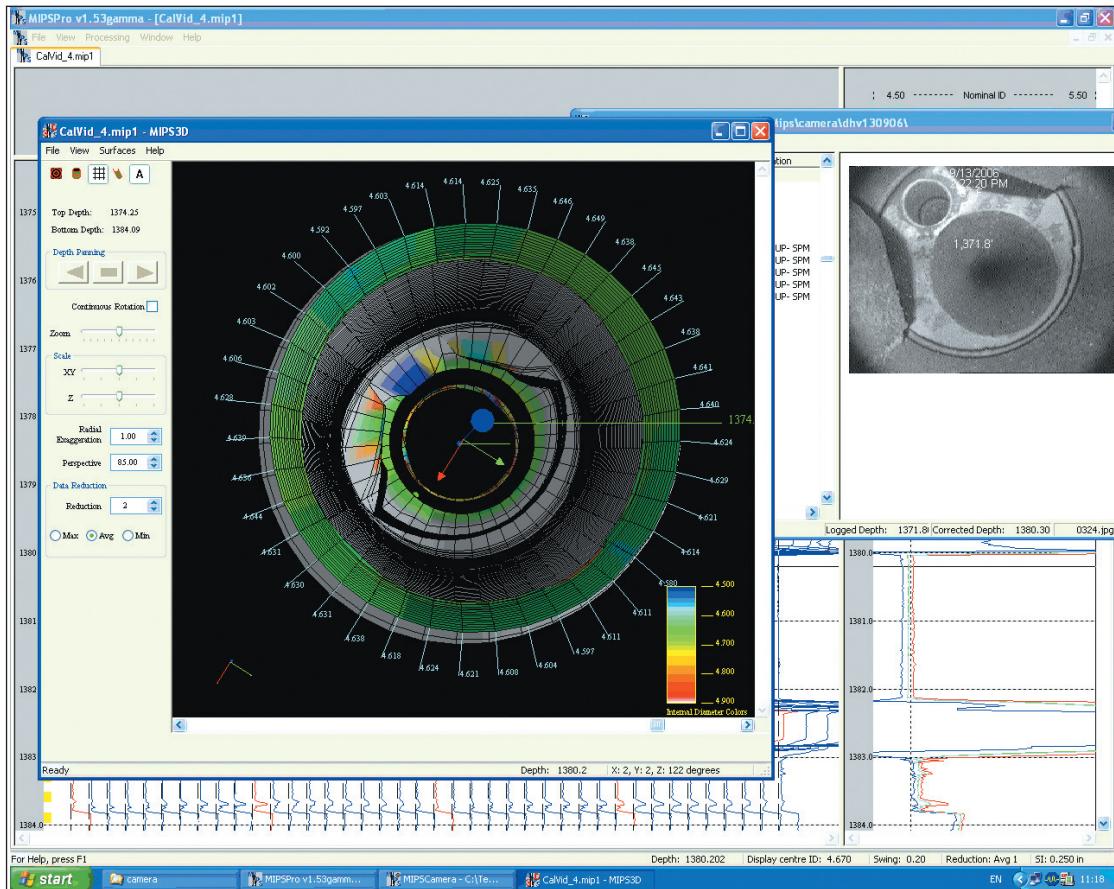
Technical Specification

Caliper

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

Tool O.D.	11 1/16" (43mm)	2 1/8" (54mm)
Maximum temperature	257°F (125°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)



Client viewer software package showing integrated sensor and video data

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 CalVid 290707_v1