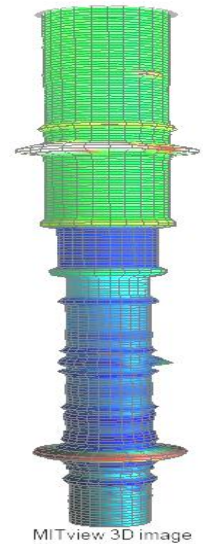




# Electronic Tubing Caliper

The 24 finger Electronic Memory Tubing Logging Instrument is used to provide the most accurate tubing measurements in the industry. The tool can be deployed in the well via slickline, coil tubing, braided cable or mono-conductor electric wireline. Once the tool reached bottom, it is time programmed for the fingers to motor to the open position. The spring loaded, hardened tip fingers push against the ID of the casing or tubing with a low force. As the tool is logged up the well, the movement of each finger is transferred to a position sensor. The output of the position sensor is then digitized for recording into the memory section or transmitted up the electric wireline. Data from each finger is monitored independently. At the end of the logging run the fingers are motored to the closed/retracted position.

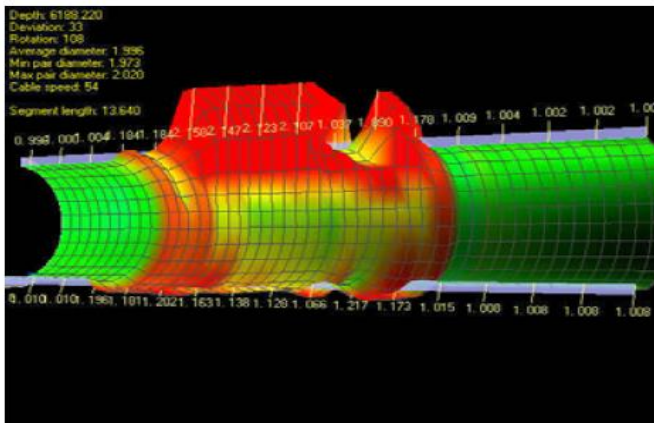
The tool contains an inclinometer to denote the high side and well deviation.



MITview 3D image

## Applications

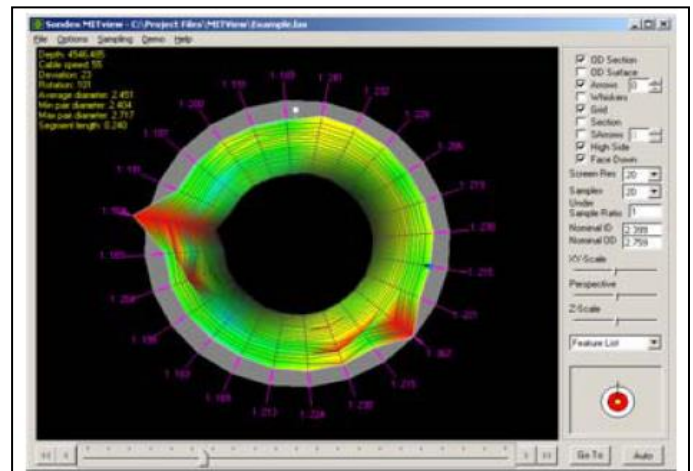
- Quantifications of scale build up or corrosion
- Accurate location of holes or anomalies
- Identifications of tubing items and damage



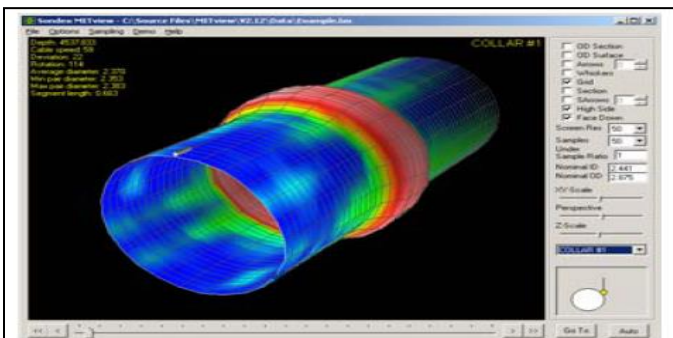
Longitudinal Section Gas Lift Mandrel

## Specifications

- Diameter - 1-11/16" OD w. fingers retracted
- Measurement Range - 1.75" – 7" ID
- Max. Pressure – 15,000 psi
- Max. Temp. - 350 degrees F



3D Image showing i.d. values & nominal tubing thickness



Section showing a collar

## Wiva Software

One of the most effective ways of understanding the condition of a well is to produce a 3D image. To achieve this, QES offers a package called Wiva.

Wiva allows the operator to look at features from different directions. Full control of the displayed images allows it to be angled, rotated, lengthened, etc.