

Mining Measurement Services Pty Ltd

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- Mining Measurement Services was formed to meet the needs of mining and civil engineering industries for a commercial service offering specialized testing methods pioneered by CSIRO Division of Geomechanics. These were the hydraulic fracturing technique and also overcoring CSIRO HI cells.
- The method preferred by Mining Measurement Services to determine insitu stress is the overcoring method using the CSIRO HI Cell and also the USBM cell.
- Our company has been operating since 1987 and specializes in Stress Measurement testing and stress software only. Much of this work is overseas including training for various rock mechanics institutes. I have conducted stress measurement tests at over 100 different Mines or engineering projects and for some of these projects I would have tested 10 different sites.
- I would have conducted well over 2000 overcores tests using the CSIRO HI cell and the USBM Gauge since 1979.
- We have also reviewed and analysed other clients stress measurement results.
- I would like to conclude this letter with a summary of my own experience:
- Since joining the CSIRO Division of Geomechanics in 1979, I have been involved in the design and manufacture of equipment for use in various geotechnical research projects and also software development. I was initially involved in a comprehensive research programme investigating roof support requirements for underground coal mines. Much of this work involved stress measurement using both the overcoring method (CSIRO HI Cell) and the hydraulic fracturing technique.
- I have since gained experience using these methods in various other geotechnical situations.
- We have also employed a Geotechnical Engineer who graduated from RMIT in 2005.
- We have developed a safe and reliable diamond drill rig specifically for geotech drilling. We can provide a total testing service including drilling.

Nicholas Litterbach
Director