



## Providing Alternative Seismic Source Options

GBG Australia can undertake full consulting services for shallow seismic refraction, reflection, tomography and shear wave investigations. We can also supply on a contract basis fully qualified shot firer / Geophysicist, Geophysicists and the rental of some interesting seismic equipment.

Today's work cover OH&S requirements for explosives handling are extremely onerous and time consuming. They not only impact on the transport and storage of explosives but may also limit the use in urban environments. Obviously for certain seismic work explosive may be the only source choice. However, GBG Australia now have a range of weight drop sources producing energy in the frequency ranges of 1KHz - 100KHz that can provide alternatives to the use of explosives. The sources are available for hire on a daily rate plus transport costs to and from the work location. The sources can be hired with a licensed Shot firer operator or on there own.

### Churchill 3m Drop Source

Specifications for Churchill 3m Drop Source	
Length:	4.2m
Max Width:	0.6m
Depth Inc. Excavator Link:	1.1m
Weight:	800Kg
3m weight drop of 250kg impacting onto grounded steel plate.	
Frequency Range:	1 – 50 KHz
Profile Depth:	0 – 50m (require stacked shots for good resolution at depth)
Trigger:	trigger from seismic geophone placed next to impact plate.



CHURCHILL DROP SOURCE IN USE ATTACHED TO 22 TONNE EXCAVATOR



EXCAVATOR ATTACHMENT

## Hiss hammer

### Specifications for Hiss hammer

Length:	1.6m
Weight	120Kg (Without gas Cylinder)
Width:	700mm on trolley
Power:	Compressed Gas Cylinder lifting weight inside sleeve
1m Drop 6.2Kg weight inside sleeve	
Frequency Range:	10 – 100 KHz
Profile Depth:	0 – 25m (stacked shots required for detailed resolution at depth)
Trigger:	Trigger system can be attached to base plate as per the photograph



SEISMOGRAPH TRIGGER ATTACHED TO BASE PLATE



SIDE PROFILE OF HISS HAMMER WITH CYLINDER



USING HISS HAMMER IN TUNNEL

### Other seismic investigation equipment available:

Synchronised cableless shot exploder

Siesprobe, downhole 4 component geophone probe

Hydrophone Arrays

Please contact Simon Williams or Jamie Speer at GBG Australia to discuss your requirements and rates.

**Email:** [simon@gbgoz.com.au](mailto:simon@gbgoz.com.au)  
[andrew@gbgoz.com.au](mailto:andrew@gbgoz.com.au)

**Phone:** (02) 9890 2122

**Fax:** (02) 9890 2922



DEPLOYMENT IN SEWERS FOR TOMOGRAPHY