

210

Resistivity

Expanding (probing) electrode method with "Wenner" configuration using "YEW resistivity meter.



Two "probes" were completed over bores D.O.M. 1 and S.M.D. 12. While there is excellent correlation between the bores and resistivity in these cases, there are two disadvantages with this method of resistivity probing -

- (i) Probing is limited to about 50 metres depth.
- (ii) The "traverse" length needs about 200 metres of ground with fairly uniform surface and underlying strata.

Refraction Seismic GT2B 12 channel

Two traverses were completed along the baseline between 600 and 800 metres east and over bore S.M.D. 12 using this equipment.

The equipment works well indicating -

- 0 to 5-7 metres      Weathered basalt
  - below 5-7 metres    Hard basalt
- 8000 - 9000 feet / sec.

However, the refraction seismic method does NOT detect the "deep lead" sand and gravel layer beneath the basalt and is in consequence of little real value in solving this particular multi layer problem at Moina.

"Bison" signal enhancement seismograph

Refraction and reflection methods.

The "Bison" works well in the refraction mode down to depths of about 30 metres, but as with all refraction surveys it cannot solve problems where softer layers (deep lead) underlie harder layers (basalt).

To carry out a REFLECTION seismic survey it is first essential to carry out a REFRACTION survey, to determine the seismic wave velocities of as many of the top strata overlying the horizons whose depth are to be determined. For example, from the refraction traverse along baseline, we obtained:-

V <sub>1</sub>	-	Topsoil	0 - 9'	1100 feet / sec.
V <sub>2</sub>	-	Weathered basalt	9'-27.5'	4350 " "
V <sub>3</sub>	-	Basalt	27.5'+	*7450 " "

(\* GT2B 12 channel gave 8000 feet / sec. for the basalt)