

<b>Method</b>	<b>VLF-R</b>	<b>Q28.3</b>
Principle	Measurement of magnetic and electric field of a remote radio transmitter	
Other information		
<b>Devices</b>		
Apparatus in use	Geonics EM 16R	EDA OMNI-PLUS
Measured components or/and quantities	Strength of magnetic and electric field	
Units	Ohm-meter ( $\Omega$ m), degree ( $^{\circ}$ )	
Reading accuracy	0.1 orders of magnitude, $1^{\circ}$	
Other information	Analogical, 1 frequency	Digital, 1-3 frequencies
<b>Measurement</b>		
General		
Measured quantities	Apparent resistivity, phase angle	
Measuring parameters	Strength of magnetic and electric field	
Quality requirement of reading accuracy	Standard error $< 0.2$ orders of magnitude/ $2^{\circ}$	
Maintenance of reading accuracy	Direction of the transmitter to be checked often enough. Electrode configuration to be maintained. Daily visit at the check point. Annual visit at check profile	
Standard error of mean values of repeat measurements		
Positioning	Error of XY: (GPS) $< 5$ m, $< 2$ m (Focus-GPS), $< 0.5$ m (VRS-GPS) Z: not usually measured Typical mean error for station coordinate, 2 m (after correction) Typical mean error for line coordinate, 5 m (after correction)	
Repeat criteria	Measurements are repeated when lateral deviation is greater than half line interval or closure error is greater than point interval.	
Other information	Changes in transmitter schedules may restrict measurement. The schedules are predictable but require active monitoring.	