

RMBAKER LLC Geophysical and Video Logging Equipment



	Equipment Name	Type of Log	Applications	Borehole/ Well Conditions
Standard Geophysical Logs	electric probe with natural gamma Robertson Geologging (USA), Inc. tools	8"/16"/32"/64" normal resistivities single point resistance (SPR) self potential (SP) natural gamma "fish" electrode attached to insulated bridle	determination of water quality indication of permeable zones and porosity stratigraphic boundaries strata correlation between boreholes	open-hole; water-filled normal resistivities to within 30 feet of water surface in well any size borehole SP range -1 to +1 volts resistivity range 1 to 10,000 ohm-meters resistance range 1 to 10,000 ohms
	dual induction with natural gamma Robertson Geologging (USA), Inc. tools	deep formation conductivity shallow formation conductivity natural gamma	identify porosity and permeability formation water salinity water quality monitoring ore detection and assay identify hydrocarbons	open-hole or plastic casing; air/water-filled any size borehole approx. 20" and 32" dipole half-spaces range 3 to 3000 milliSiemens per meter data can be reported as resistivity values
	impeller flowmeter Robertson Geologging (USA), Inc. tools	fluid velocity; stationary samples	well flow measurement with or without pumping identification of permeable zones casing leak detection	open/cased-hole; water-filled centralizer capable of 42" borehole diameter or less lower limit flow rate of 3.3 feet per minute
	temperature/conductivity sonde Robertson Geologging (USA), Inc. tools	fluid conductivity with differential fluid temperature with differential fluid conductivity normalized to 25 degC	fluid salinity water quality assessments ground water monitoring temperature gradient temperature compensation of other logs	open/cased-hole; water-filled optimal for stabilized boreholes (24 hours) any size borehole conductivity range 50 to 50,000 micro-Siemens per centimeter temperature range 0 to 70 degrees Celcius
	caliper, small to large diameter boreholes 3-arm caliper Robertson Geologging (USA), Inc. tools	borehole diameter; 4 to 87 inches	location of borehole collapse or obstructions cement volume calculations for grouting location of cracks, fissures, caving, faulting, casing breaks correction of other logs affected by borehole diameter	open/cased-hole; water/air-filled up to 87" borehole diameters 5 data channels for idealized data offsets
	water and gas sampler Robertson Geologging (USA), Inc. tools	fluid and gas samples; discrete and <i>in situ</i> sealed chamber samples	sampling well fluid or gas at depth for lab analysis	open/cased-hole; water-filled any size borehole
Acoustic Logs	acoustic - full waveform with CBL Robertson Geologging (USA), Inc. tools	shear wave velocity cement bond log formation velocity full waveform variable density log (VDL)	lithology identification porosity lithology strength and elasticity fracture and permeability indications in dense lithologies CBL identification of casing vibration zones	open-hole; water-filled cased-hole; water-filled for CBL 12" or less borehole diameter optimal; 15" maximum
	acoustic borehole televiewer Robertson Geologging (USA), Inc. tools	sonic reflection image high resolution 3D scan of borehole	fracture identification and orientation lithology texture and fabric identification core orientation casing inspection	open/cased-hole; water-filled 8" or less borehole diameter
Video	camera - dual view Aries Industries, Inc. BT9600 camera video recorded on DVD, VHS, HDD or Mini HIFI video recorded on two tuners simultaneously to prevent accidental data loss	360 degree downhole view 360 degree rotating side view LED light, 12" and 18" incandescent masts	borehole condition survey and inspections well construction survey casing inspection well forensic studies	open/cased-hole; clear fluid or air-filled centralizer for up to 25" borehole diameters diameter limitations depend upon water quality