



#### APPROXIMATE DRILLING RATES OF FOUR DRILLING METHODS

DRILLING METHOD	SAMPLING TECHNIQUE	SAMPLING INTERVAL	APPROXIMATE DRILLING RATE
Rotasonic	4-inch core barrel	Continuous	160 feet/day
Hollow Stem Auger	Split spoon	5 feet	42 feet/day
Cable Tool	Split spoon	5 feet	20 feet/day
Cable Tool	None	None	40 feet/day
Air Rotary/ Casing Driver	None	None	30 feet/day

Courtesy of 645th Air Base Wing Air Force Materiel Command Office of Environmental Management at Wright-Patterson Air Force Base, Ohio

Sonic Drilling Supplies Ltd supply and service the drilling industry in the UK, Ireland and Europe. We are an independent supplier of drilling consumables/components and accessories to all the different sectors of the drilling world in the UK.

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### DRILLING METHODS COST/TIME COMPARISONS

WELL NUMBER	ACTUAL DEPTH	GENERAL STRATIGRAPHY OF BOREHOLE	TIME COMPARISON, ESTIMATED DAYS TO DRILL AND INSTALL WELL		
			CABLE TOOL ESTIMATED DAYS TO COMPLETE	ROTA-SONIC ACTUAL DAYS TO COMPLETE	PERCENT REDUCTION IN TIME
1	117	Sand and silty clay with cobbles	11	3	73
2	305	Silty clay	28	7	75
3	127	Sand and silty clay with gravel	12	2	83
4	249	Silty clay and sand	23	3	87
5	270	Silty clay	25	4	84
6	150	Sand and silty clay with cobbles	14	3	79
7	180	Plastic clay, sand and silt	16	2	88
8	360	Plastic clay, sand and silt	33	10	70
9	140	Sand and silty clay with cobbles	13	2	85
10	289	Sand and silty clay with cobbles	26	2	92
11	307	Sand and silty clay with cobbles	28	6	79
<b>TOTAL</b>			<b>229</b>	<b>44</b>	<b>81</b>

**COMPARISON OF THREE DRILLING METHODS:  
DRILLING RATES, SAMPLING METHODS AND SOLID WASTE GENERATION**

DRILLING METHODS	AVERAGE FEET/DAY	SAMPLE METHOD	DRUMMED SOLID WASTE	BOREHOLE DIAMETER
Hollow Stem Auger	37	2" or 3" x 24" continuous split spoon	15 feet/drum	8"
Cable Tool	11	2" or 3" x 24" continuous split spoon	10 feet/drum	10"
Rotasonic	57	4" or 7" continuous core	60 feet/drum	8"

**SUMMARY OF DRILLING METHODS**

DRILLING METHOD	DRILLING PER DAY	SOIL SAMPLING	PID SCREENING
Hollow Stem Auger	5.5	Split Spoon (1.5 meter intervals)	Yes
Air Rotary	29	Split Spoon (3 meter intervals)	No
Cable Tool	6	Bailer	No
Rotasonic	49	Continuous	Yes

All methods summarized are based on the installation of 18 meter 50 mm diameter monitoring wells over an eight hour working day.

Courtesy of Soil & Groundwater Cleanup, May 1997