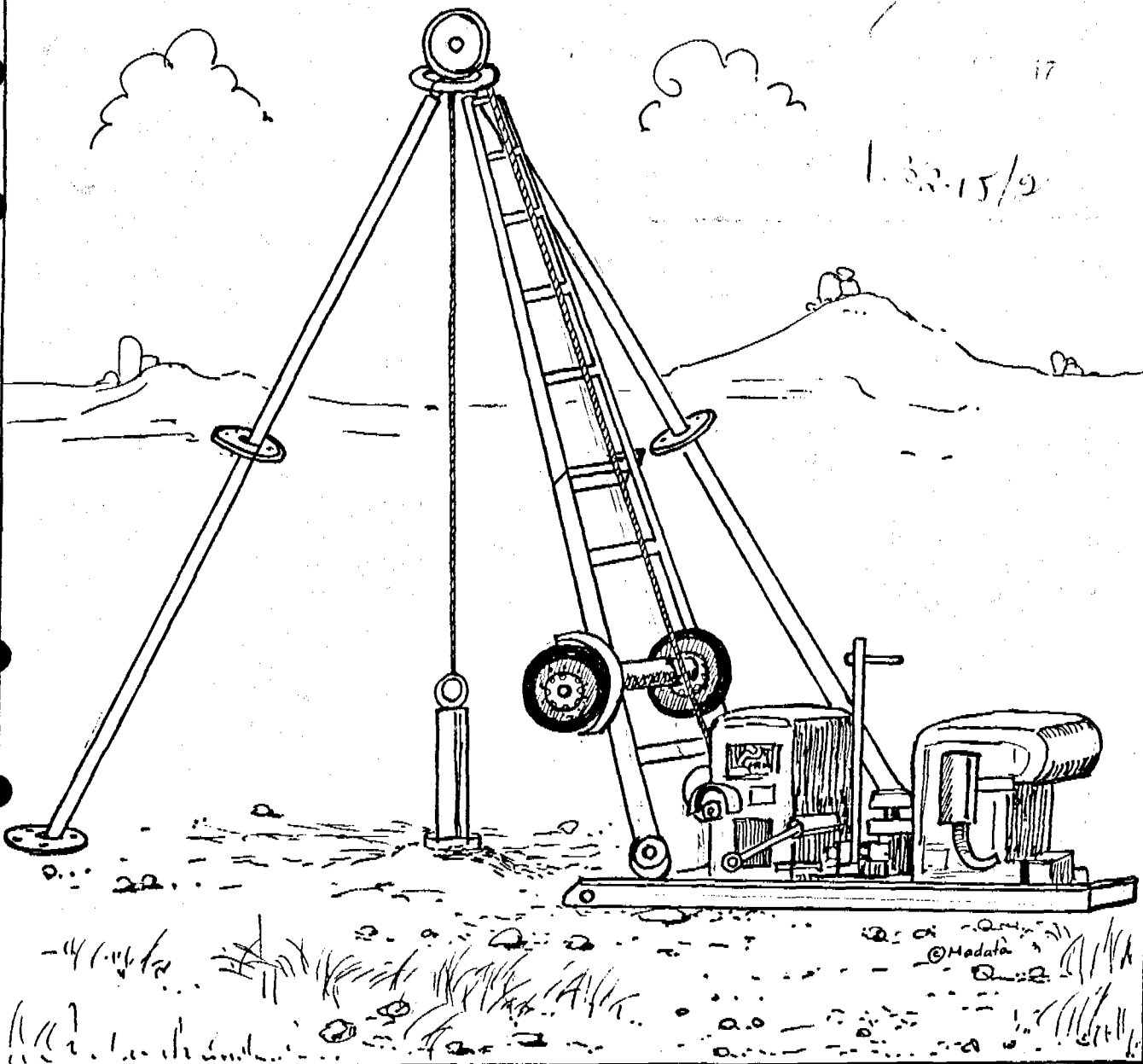


824 TZLA89

REGIONAL REFERENCE CENTER  
FOR COMMUNITY WATER SUPPLY AND  
SANITATION (RCS)

MOKO  
03. 10. 03

# Guideline Drilling



# Hesawa

NOV. 1989

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### Drilled Tube Wells, Guidelines for 1989/90

Drilling will continue as one accepted methodology for Village Water Supply constructions in the HESAWA Programme.

Based on the experiences of the past years trial drilling, one Pilcon cable tool drill rig in each Region will be included in the HESAWA programme. Similarly the Atlas Copco survey rig B.34 will be kept in operation in Mwanza Region.

The Pilcons and the B.34 are not suitable for hardrock drilling and shall be operated only in soft and medium hard formations. If it will be found necessary to drill in hardrock formations, a contractor will be hired to undertake that task. In such a case the Region(s) having such plans shall present those to the Annual Review October 1989 for approval.

Each District shall develop its own Drilling Programme considering the most cost efficient drilling operations and the guidelines given. The Annual Review will approve drilling programmes and allocation to Districts of the rigs.

All rigs shall be run on a two-shift system. A complete crew for both shifts will comprise eight members:

- one Driller in charge
- three Operators
- one Hydrogeologist technician
- two Labourers
- one Driver

The Ministry of Water Development will provide one Zonal Drilling Inspector who will provide backstopping to the rigs under the HESAWA programme in the form of:

- participation in an advisory capacity in Drilling meetings and workshops.
- Undertake quality control on drilled wells and drilling operations and report to RWE and ZHC on problems and short falls.

- Advise on technical problem solving.
- Assist on procurement and supply of material spares and equipment.
- Inspect rigs and advise on services.
- Assist/Advice on reporting to RWE.
- Submit quarterly and Annual Drilling reports to RWE and ZHC and the Ministry of Water.

Each Rig will be provided with a tractor for heavy transports. DWE in the area of operations shall provide lorry transport when required. HESAWA pool lorries or RWE's lorry may occasionally help out with heavy transports.

Zonal Drilling Inspector and Regional Hydrogeologist will be provided transports from the HESAWA pools for programme impl.

Each Rig in charge will be allocated one motorcycle for improved communication in the operation area.

Crew members will be offered to buy bicycles in accordance with the transport guidelines.

Radio communications will be established 1989/90 with Rigs 59 and 62.

Fuel, lubricants and spares for the rigs and the support transports will be provided from D-funds.

Ten days allowances as per Government scales will be paid out of D-funds monthly to approved crew members in addition to the allowances paid out of local funds by Region/District.

Survey Equipment, e.g. Terrameters will be provided by the Programme.

Each Rig shall be provided with First Aid Kit and instructions of refill.

Tube Well Drilling shall be seen as one of the methodologies for meeting villagers requirements as spelled out in the village plans. Therefore Drilling shall only be undertaken where hand augering or well digging is not possible or where depths will exceed 15 meters.

In accordance with the HESAWA principals the operations shall be based on villagers participation, requests and agreements.

First contact with the villages is taken by CDO:s, CDA:s or DPO:s well informed about drilling plans.

Siting shall be made by a team comprizing Surveyor, Village leader, two members of the Village HESAWA Committee (preferably women) a CDO/CDA and or Promotion Officer.

The Rig In Charge is:- The head of the drilling crew and its operations on the site.

- responsible for providing Progress and Completions reports to RWE with copy to ZDI, ZHC, DWE.
- responsible for ordering, receiving and controlling materials from the Region
- responsible for following Agreed Drilling Plans and route Maps.
- responsible for correct recording of boreholes and keeping high quality/standards of work.

The Rig Operator is responsible for:

- reports to the Driller in Charge
- Operating the rig
- Checking and reporting rig condition
- reporting material needs
- keeping safety as work.

The Hydrogeologist Technician is responsible for follow-up and reporting to Regional Hydrgeologist on soil samples, pump tests and water quality.

The DWE is in charge of:- the development of drilling plans and routemaps based on village plans and siting.

- The supervision of the drilling activities including quality control.
- Pump installation soonest after borehole completion and recording wells and installation data.
- Ensure timely payment of allowances from local funds.
- Ensure representation of drilling in the DAT-meetings.
- Providing transports when required.
- The District shall hand over the wells to the consumers after having trained caretakers, arranged supply line of spares, encouraged opening of Village O & M Accounts. DWE is one of the main facilitators in this process.

DWE is also in charge of the monitoring of the wells and rectifications if needed during the grace period i.e. from the data of the completion/installation report (accepted also by village leader) until 12 month later when formal handing over takes place.

RWE shall be responsible for:

- The Drilling Operations (excluding pump installation),
- The Rig, Rig Crew, Tractor, material and spare supply.
- Assisting the DWE in the development of Drillplans by providing the services of the Regional Hydrogeologist.
- Timely payment of allowances from central government funds to the Regional Survey team.
- Scrutiny and signing of Completion Forms.
- Inspection of the wells prior to handing over i.e. towards the end of the grace period.
- The RWE will be supported by the STM consultancy services for procurement and delivery of material to site in accordance with laid down procedures.
- The RWE shall call quarterly drilling meetings.

Participants: RWE, DWE, Driller in Charge, DCDO, DPO, ZDI, Stores & Transport Manager (STM), HESAWA Advisor, RHC, RHG, DHC, Ward Secretary for actual Ward, of Operations, ZHC and other officers relevant to the Agenda of the meeting.

## HESAWA Drilling Operation, Organisation

Drilling operations within the HESAWA structure and considering the HESAWA concept of decentralization to local authorities and Village based operations could be organized as follows:

(the shaded boxes shows partners directly and actively involved)

