

To Abay (Nilo)

Addis Abeba

Ref.No 716/28/25

Date 22/06/25

Subject :- To Define you, we send Shallow Well drilling Project Proposal.

Us defined in the above we like to defined that we send 7 page shall well drilling for small scale irrigation project proposal attached to these letter.

Your Sincerely





Leelissa Megarsaa

Tobias

Ministry of Agriculture and Rural Development

Ministry of Service

Ministry of Service

Ministry of Service

**Finfine Surrounding Oromia Special Zone
Walmera Woreda Water Resource Office**

**Walmera Woreda Water
Mineral and Energy Office**

**Geba Kemisa Manually Shallow Well
Drilling project proposal**



Mar, 2013

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1. PHYSICAL DESCRIPTION OF PROJECT AREA

1.1. Location and Accessibility

Geba Kemisa is a village in peasants association found in oromia regional state, Finfine Surrounding Oromia Special Zone Welmera district at a total distance of 66km from Addis Ababa. The first 32 km from Addis Ababa to Holeta is the main asphaltic road and the next 34km up to the site is weathered seasonal road.

1.2. Climate, Hydrology, and vegetation cover

The area has sub-tropical climatic condition depending on the annual temperature and altitude of the area. The area receives two seasons of rain fall. High amount of intensity during the summer and a medium amount during the spring. Most amount of this precipitation that falls on the land surface is recharging the ground water where as part of the precipitation will disappear by different mechanisms like evaporation, evapotranspiration and runoff. The study area is sparsely vegetated area. The most dominant vegetations in the area are eucalyptus trees.

1.3. Topography and Drainage

The topographic feature is flat land, medium sloping & Surrounded from the north & northeast direction by ridges. The area has dendrite drainage pattern that run from north to south toward the flat land that dominate the study area in the south direction. The dominated topographic features that observed in study area is flat lands. There is no river in the area.

2. GEOLOGY AND HYDROGEOLOGY

2.1. Geology of the area

The geological unit of the area is not clearly exposed but at top of the hill that found at the northern part of the study area there is tuff units and other parts of study area is covered by thick alluvial sediments.

2.2. Hydrogeology of the area.

Volcanic rocks with fractures are good ground water bearing formations. Topographic high areas, mountains, hills are recharging areas where as topographic lows are known to be discharging areas. From this investigation the hydro geological features observed in the study area indicates the presence of ground water.

2.3. Water Resources Potential

2.3.1. Surface Water

There are no rivers that found in the area. But there are heavy rain fall in summary season. This is necessary to water harvesting.

2.3.2. Ground water

- Direct infiltration from rain water & run off from ridges are the only recharging source for the ground water.
- Topographic features, soil textures, geology, hydrogeology & recharge discharge conditions of the area leads to expect medium ground water potential at shallow depth.

2.3.3. Existing Source

The villagers are using in Geba kemisa Irrigation for tradition & Supply by genitor from Holeta River base it is not enough for communities of Geba kamisa for develop economic activities

2.3.4. Proposed Source

A reservoir is the simplest activities that recommended to farmers will acquire skills & experiences, also improve their crop diversity & productivity in the area then improve their income.

3. SOCIO-ECONOMIC CONDITION

3.1. Socio- Demographic Aspects

The Site is accessible during the dry period. The peoples are settled densely and the religion of the people is orthodox.

According to the information we get from the local dwellers there are 200 HH accounting for a total population of 1000. Average family size in this village is five per house hold.

3.2. Economic Activity

The economic activity of the villagers is mainly dependent on agriculture and raising of live stock animal. The major income sources of the peoples are sales of crops and lives tock animals. The income generated from sales of these agricultural products and live stocks in mainly spent for purchasing of agricultural inputs like fertilizers, payment of various government taxes and purchasing of house hold goods.

3.3. Settlement pattern

As the result of earlier valorization program is planned and compacted with some type of infrastructure including road. There is one elementary school and no telephone and light services.

3.4. Social Services

3.4.1. Health and sanitation facilities

Geba kamisa has its own clinic. The common diseases occurring in this village are

Diarrhea, common cold and Ameba.

Concerning sanitation, the people do not use latrine for excretion of waste disposal but they use open field disposal.

3.4.2. Education Service

Geba Kamisa has got one elementary school which gives educational service up to grade 8. The school has 800 students.

3.4.3. Market Facility

Gaba kamisa has its own marketing place that is one day a week on Thursday.

3.4.4. Power supply and Other Social Services

The village has no power supply services but the people use fire wood. There is no hotel, Restaurant, Postal and telephone Services.

3.4.5. Housing Condition

Houses in Geba Kamisa are hatch roofed and wooden made and there are also iron sheet covered houses.

3.4.6. Community's need and willingness

The community has described its willingness to actively participate on the implementation of the project.

3.4.7. Affordability and Willingness

They told us that they have the capacity use irrigation water effectively for develop their economy.

3.4.8. Community participation and Training

The Community will participate through out varies stages of the project cycle from the beginning to end by monitoring and evaluation of the project. So that the project mainly feasible hence it is backed by strong community demand. More over water is essential for the survival of human being, it is strongly discussed that in the area water problem is strongly severed. Technically of is accepted since current government policy mainly focused on rural development.

3.4.11. Sustainability of the project

Most of the activity in this project will be the responsibility of local community through irrigation water committee and collecting water fee for maintenance. The committee would be pay for services delivered buy maintain technicians as well as for purchasing a spar parts when a need arises. Moreover the water fee collected by water committees ensures sustainability of the project.

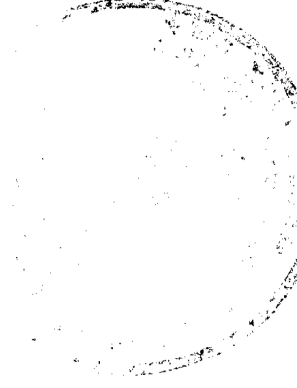
4. ENGINEERING DESIGN OF THE PROJECT

4.1. Emphasis on selected water supply sources

As could be observed during the study of the project the efforts were made to get different options of water sources in order to select more economical and sustainable water source specially springs.

The hydrology of the area shows that the area promising to get run off at a reason of rain fall.

Irrigation Project scheme that will be developed for rural area should be economical, it shall require skilled laborer and not difficult to operate and maintenance. So that the effort that travel to the site to select appropriate water source to the vicinity comes to the decision of drilling at appropriate plain area to the village.



4.1.1. Objective of the project

Farmers & Students will acquire skills & experience in this irrigation water project.

- ❖ To provide sustainable food supply
- ❖ To baring 2 hectares of land under irrigation
- ❖ To increase income of the farmers
- ❖ To open employment opportunity for the community.
- ❖ To Provide forage or green crop residues for live stock of the area under consideration

4.2. Inputs, outputs and indicators

In puts:- resources that are needed to implement the project i.e. community participation & the Abay or Nilo NGO fund used for constriction our inputs.

Outputs:- This includes:-

- The target Under ground water benefited from implemented project.
- The community can harvest two to three time per year
- Increase in came of the forme

Therefore the project that is going to be implemented should of least fulfill average water demand of the village.

5. QUALITY AND QUANTITY OF EXISTING WATER SUPPLY SOURCE

5.1. Quality of Existing Water source

In most case the quality of the water supply source for community in rural part of our country is very poor with respect to their sanitation proble.

Since there is no water supply scheme highly protected in Geba Kamisa the communities highly suffering from water born disease.

5.2. Quantity of Existing water Supply Source

In Geba Kamisa Area the community is using water for domestic purpose from unprotected of very low discharge spring and open hand dug wells & insufficient dep well. During the most dry season of the year both spring and open hand dug wells are dries and shortage of water encounters the community.

6. Problems met due to the absence of well and protected water of Geba kamisa.

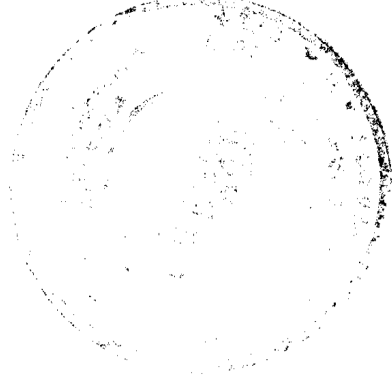
- Exposure of community to water borne and related diseases
- Unsatisfactory domestic water demand community during the dry period of the year
- High labor loss of the fetch a pot of water for children and women

7. Conclusion

Geba Kamisa is one of the most peasant association in the Walmera Woreda. Lack of adequate water and suffering from water borne and water related diseases. The community in Gebe kamisa has been severely affected by lack of safe & enough water for both drinking and domestic use.

8. Recommendation

So to improve the quality life of the Geba kamisa village through creating access to safe water, The village will be benefited with all year round and easily accessible potable water thus can be achieved through drilling Shallow well (up to 60 meters)



Cost Estimation Manually Shallo Well Driiling for irrigation in Geba Kemisa kebele

Average depth 40m

No	Description	Unit	Qty	Unit Rate	Total	Remax
1	Mobilization of man power & equipment drilling constricton	Lst	-	-	8000	
2	Demobilization of man power & equipment of ter completing drilling constricton	Lst	-	-	3000	
3	Stady & design project propozal	Lst	-	-	8000	
3.1	Laber Workers	Lst	-	-	25000	
3.2	Supervision cost	-	-	-	10000	
3.3	Materrals requers	-	-	-		
3.4	Galvanized iron pipe 3" with coupling	Lst	2	1950	3900	
3.5	Chain pipe wrench lakger	Lst	1	3000	3000	
3.6	Plamber wrench 36"	Lst	1	600	600	
3.7	Plumber Wrench 24"	Lst	1	300	300	
3.8	Plumber Wrench 18"	Lst	1	200	200	
3.9	Nylon rope (thick) 12mm	M	12	10.83	130	
4	Metal bucket (6lit)	Lst	2	25	50	
5	Mish wire	M	2	40	80	
6	Desel pump with oil material 3"	Lst	1	34000	34000	
7	Cement	Quin	1	250	250	
8	River Gravel	M ³	1	400	400	
9	Sand	M ³	1	500	500	
10	Stone	M ³	1	200	200	
11	Tithing Wire	Kg	0.5	60	30	
12	Spade With handle	Lst	2	75	150	
	Digger (lamba) with handle	Lst	2	150	300	
	Total				98,090.00	
13	Contangence 10 %				9,809.00	
	Total with contangence				107,899.00	
	Vat 15%				16184.85	
	Ground Total				124,083.85	

