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RURAL WATER AND SANITATION PROJECT

ELEVENTH QUARTERLY REPORT

OCTOBER - NOVEMBER - DECEMBER, 1983

USAID Project No. 632-0088
Morrison-Maierle Contract No. 1427-003-01

Technical Assistance Contractor
Morrison-Maierle, Inc. Consulting Engineers
HELENA, MONTANA

19 January, 1984

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RURAL WATER AND SANITATION PROJECT

11TH QUARTERLY REPORT

October-November-December, 1983

1. Summary

1. During October Mr. Ruben Hubbard, USAID, completed a management audit of the Project.
2. Two studies recommended by the second Project evaluation team have been approved by USAID and GOL. These are the K.A.P. and Impact evaluation studies. Final arrangements for implementation are in process.
3. The third quarterly meeting of VWS administrative staff and construction personnel was held at the Victoria Hotel on October 21.
4. GOL has approved M536,000 to fund a special drought relief project involving contract drilling of 200-250 bore holes. The Project will provide USAID purchased hand pumps.
5. CIDA is sponsoring a contract drilling project in Mohale's Hoek eventually involving up to 100 bore holes. USAID purchased hand pumps will be installed.
6. During this quarter 25-USAID sponsored projects were completed serving 13,770 people (see Section IV for a summary of construction activities for 1983).
7. Pipes and fittings purchased under PIO/C 632-0088-4-10175 started arriving in Mohale's Hoek as of December 19.
8. 141 Moyno hand pumps purchased under PIO/C 632-0088-5-30042 were delivered to VWS Mafeteng stores in December.
9. A new DVS volunteer engineer has been appointed district engineer in Mafeteng to replace an IVS volunteer due to depart Lesotho in March, 1984.
10. The second two-year project work plan was submitted to USAID for approval.

II. Problems and Concerns

At the request of Ministry H.Q., VWS has submitted a list of 22-employees qualifying for establishment and/or promotion. The original request to GOL dates from 1982 and was associated with the Project funded System Maintenance Support Program. Positions were approved by Cabinet

Why?

Personnel and then frozen. We have hopes that these people, mostly involved in construction and maintenance, can now be brought into establishment as permanent government employees and/or promoted to the higher grades they are qualified to hold as a result of successfully completing VWS training programs.

III. Conclusions and Recommendations

None this quarter. *Nothing to recommend?*

IV. Construction

1. Tables C-1 through C-4 summarize construction activities for December and for calendar 1983. Final production figures considerably exceed predictions made early in the year.

TABLE C - 1

SUMMARY OF VWS CONSTRUCTION ACTIVITIES
FOR CALENDER YEAR 1983

	<u>Previous Total</u>	<u>December</u>	<u>Total For 1983</u>
<u>NATIONWIDE</u>			
Projects completed	77	11	88
Population Served	35,694	8,450	44,145
Major Repairs Completed	6	0	7
Projects Under Construction	52	49	-
<u>USAID PROJECT ACTIVITY (included above)</u>			
Projects Completed	51	7	58
Population Served	25,130	5,250	30,380
Major Repairs	0	0	0
Projects Under Construction	35	28	-
<u>BOREHOLE DRILLING ACTIVITIES</u>			
Total Meters	6,345	631	6,976
Usable Meters Drilled	4,409	248	4,657
Drilling Efficiency (by meters drilled)	69.5%	39.3%	66.8%
Usable Boreholes	92	5	97
B/H Redeveloped	12	0	12
B/H Yield Tests	14	1	15
Hand Pumps Installed	119	13	132

USAID LIFE OF PROJECT CONSTRUCTION ACTIVITY

Projects Completed	:	71
Population Served	:	37,680
Hand Pumps Installed	:	174

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TABLE C - 2

SUMMARY OF USAID DONOR PROJECTS UNDER CONSTRUCTION

(USAID-Financed in Part or in Whole)

G = Gravity; H/P = Hand Pump; PP = Power Pump; R = Rehabilitation
E = Expansion; WM = Windmill, Hr Hydroram, SP = Spring Protection

<u>Name</u>	<u>Code</u>	<u>Population</u>	<u>Donor</u>	<u>Percent Completed December 83</u>
<u>BUTHA BUTHE</u>				
<u>BEREA</u>				
Ha Ntsekhe (G)	B - 29	850	USAID	10
Ha 'Matholoana (R.E.PP)	B - 4	1,500	USAID	90
Ramatsue (G)	B - 81	400	USAID	95
Bela Bela (SP-R) P.H.I	B - 21	600	USAID	60
Ha Mokhati (H/P)	B - 25	500	USAID	25
Ha Thafeng (SP)	B -	350	USAID	60
<u>MASERU</u>				
'Mantsebo (G)	MAS- 24	1,700	USAID	97
Sepeke (H/P)	MAS- 69	500	USAID/CIDA/RCM	20
Pomela (H/P)	MAS	230	USAID/CIDA/RCM	50
Ha Masilo (G)	MAS-182	500	USAID	10
<u>MAFETENG</u>				
Ramathalea (G)	MAF- 65/1	300	USAID	85
Matsaba (PP)	MAF- 93	400	USAID	10
Maliepetsane (G)	MAF- 23	250	USAID	50
Tsakholo Clinic (PP)	MAF- 97/3	-	USAID	95
Tsakholo (C) (G)	MAF- 97/3	-	USAID	50
Motsekuoa (R,PP)	MAF- 22	?	USAID	40
Tsangoane (G)	MAF- 73/2	460	USAID	55
Mahosi (G)	MAF- 93/2	120	USAID	40
Ha Mphobe (H/P)	MAF-127	950	USAID	50
Ha Rabeleng (PP)	MAF-128	800	USAID	15
Ha Ralintsi (H/P)	MAF-123	1,850	USAID	5
<u>MOHALE'S HOEK</u>				
Mpharane (PP)	MH - 42	1,300	USAID	40
Ha Pii (H/P)	MH - 4	700	USAID	15
Ha Makoili (H/P)	MH - 83	300	USAID/CIDA	50
Noka Ntso (G)	MH - 40	300	USAID	15
Sekhutlong (G)	MH - 33/2	250	USAID	5
Aggregate of 14 villages (H/P)	-	2,800	USAID/CIDA	50
<u>QUTHING</u>				
<u>QACHA'S NEK</u>				
<u>THABA TSEKA</u>				
Hloahloeng (G)	TT - 33	350	USAID	45

TABLE C - 3 (Continued)

<u>Name</u>	<u>Type</u>	<u>Code</u>	<u>Pop.</u>	<u>Donor</u>	<u>Date</u>	<u>Remarks</u>
Matsatsaneng	(G)	BB - 69	350	USAID	Nov. 83	
Koali	G	B - 134	300	USAID	Nov. 83	
Seiso	HP	MAF- 143	1,000	USAID	Nov. 83	12 H/P
Ntlhakeng	HP	MAF- 125/2	200	USAID	Nov. 83	1 H/P
Lebeta	HP	MAF- 125/3	300	USAID	Nov. 83	4 H/P
Manganeng	G	MAF- 5/2	150	USAID	Nov. 83	
Lifelekoaneng II	PP	MAF- 1/1	200	USAID	Nov. 83	
Basieng	G	Q - 4	1,000	USAID	Nov. 83	
Matebeng	G	QN - 27	550	USAID/DANIDA	Nov. 83	
Mokhosi	G	MH - 33	300	USAID	Nov. 83	
Bokoro Khikhune	G	BB - 4/8	1,600	USAID	Dec. 83	
Ha Ntlama I	G	B- 47	600	USAID	Dec. 83	
Lerata	H/P	MAS- 23/2	200	USAID	Dec. 83	3 H/P
Mopenyeki	H/P	MAS- 23/3	600	USAID	Dec. 83	2 H/P
Hata Butle	H/P	MAS- 23/4	300	USAID	Dec. 83	4 H/P
Rammoko	H/P	MAF- 172	850	USAID	Dec. 83	8 H/P
Mokanametsong	G	Q - 4	1,100	USAID	Dec. 83	

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TABLE C - 4

Village Water Supply
Rural Population Served

	<u>End 1982</u>	<u>End 1983</u>	<u>Total</u>
Completed Systems	470	88	564
Rural Population Served	185,710	44,145	229,855
% Rural Population served	16.2%	3.8%	20.0%

Total Population Served by District At End of 1983

<u>District</u>	<u>Number of projects</u>	<u>Total population served</u>	<u>Total Rural population</u>	<u>%</u>
Butha-Buthe	49	23,080	76,400	30.1
Leribe	66	41,730	201,800	20.7
Berea	67	27,210	140,900	19.3
Maseru	76	32,790	202,600	16.2
Mafeteng	87	38,520	153,800	25.0
Mohale's Hoek	41	14,960	137,700	10.9
Quthing	41	15,315	89,000	17.2
Qacha's Nek	49	13,500	37,400	36.1
Thaba Tseka	32	10,000	37,000	27.0
Mokhotlong	56	12,750	75,400	16.9
Total	564	229,855	1,152,000	20.0

Population Served by District in 1983

<u>District</u>	<u>Village Completed</u>	<u>Population Served</u>	<u>Average Village Size</u>
Butha-Buthe	8	3,810	476
Leribe	5	5,430	1,086
Berea	9	3,120	347
Maseru	12	4,890	408
Mafeteng	33	15,520	470
Mohale's Hoek	6	4,060	677
Quthing	5	4,815	963
Qacha's Nek	2	600	300
Thaba Tseka	5	1,550	310
Mokhotlong	3	350	117
Total	88	44,145	

2. Of the 88 village water supplies completed by VWS in 1983, 58 were totally or partially funded by USAID:

<u>Type</u>	<u>No.</u>	<u>Pop.</u>	<u>Avg. Size</u>	<u>Per Capita Cost</u>
Hand Pumps	28	13,070	467	\$30
All Other Types	30	17,310	577	\$40-60

After two full years of construction activity 71 villages supplies have been completed under the sponsorship of USAID serving 37,680 people. In terms of the objectives established in the Project Paper 34% of the villages have been completed serving 21% of the population. Since it appears that average village size is somewhat smaller than assumed by the PP, Project productivity should be measured against the population objectives of 180,000.

In the coming two years we expect that 70% of all VWS construction will be totally or partially funded by USAID with an annual production of approximately 40,000 people served. If this rate can be maintained the population objective will be exceeded.

3. The importance of hand pumps as the only viable option for supplying villages in the lowlands is recognized by GOL and USAID. A major GOL sponsored drought relief program (M536,000) just getting underway provides for the contract drilling of 200-250 bore holes in Leribe, Berea and Maseru district. A CIDA sponsored program in Mohale's Hoek district has already completed 30 of 100 bore holes under contract to a private driller. Small donors are also taking an interest by providing funds for local contract drilling or by direct purchase of drilling rigs for VWS. VWS will purchase an additional cable tool rig making a total of 12-rigs operated by VWS having an annual capacity of 110-120 bore holes. All of this activity is under the direct supervision of VWS.

USAID will participate as a joint donor in this work by providing hand pumps. To date 400 H/P's, as originally provided in the PP, have been received (174 installed) and USAID has requested approval to purchase an additional 500 H/P's following a recommendation by T/A team.

4. We expect an increase in production of gravity system following completion of our supervisory course in March. Twelve new supervisors will be distributed throughout the districts as assistants to district engineers they will be capable of design and construction management which should increase productivity approximately 30%. These people have also been given driver training so that they can operate independent of the district engineer.

V. Training

1. The following table is a summary of training activity sponsored in whole or in part by the Project

TABLE T-1

Project Training Program
(through December, 1983)

	<u>To Date</u>	<u>PP Objective</u>
Waterminders	379	547
Masons	88	0
Foremen	27	0
Supervisors	12 (in training)	0
STO's (TTS Graduates)	7 (+3 in training)	20
Engineers	3 (Training in USA)	3
Mechanics	8	0
Drivers	7	0

2. In October 31 waterminders were trained in Mafeteng district.

VI. Health Education

1. The Project sponsored Knowledge, Attitude and Practice (K.A.P.) study was finalized and is now being implemented. Research assistants from NUL have conducted over 500 interviewes in selected villages under the direction of Dr. Edward Clarke, NUL. A report of the result of this study is expected in March.
2. Final arrangements are underway to begin a 2-year study and evaluation on the impact of clean water on public health. Mr. Steven Esrey, a Doctoral candidate at Cornell University will conduct the program which is being sponsored by the Project. Mr. Esrey is expected to be in Lesotho for 12-15 months.
3. Health Education Pitsos on Clean Water, Disease Prevention, Environmental Sanitation

<u>Place</u>	<u>Date</u>	<u>Persons Attending</u>	
<u>Mafeteng District:</u>			
'Maliepetsane	Octobet 18	Adults	92
		Students	<u>724</u>
			816
Van Royens Gate	October 21	Adults	328
		Students	<u>573</u>
			901

<u>Place</u>	<u>Date</u>	<u>Persons Attending</u>	
<u>Mohale's Hoek District:</u>			
Mohalinyane	October 27	Adults	71
		Students	<u>428</u>
			499
		Total	2216

4. Village Health Worker Refresher Courses

<u>Place</u>	<u>Date</u>	<u>Persons Attending</u>	
<u>Mafeteng District:</u>			
Bolikela	Nov. 7th-11th		23
Sekameng	Nov. 21st-25th		20
Tsakholo	Dec. 12th-16th		<u>25</u>
			<u>68</u>

These refresher courses were held for existing village health workers from villages in the Sekameng, Tsakholo, Thabana Mohlomi and Bolikela areas. Emphasis was on diarrheal diseases, clean water and sanitation.

5. Other Training ProgramsA. Women Bureau Program (Quthing)

The health education team participated in the Women in Self Help workshop at Farming Training Centre in December. Thirty eight women participated in discussions on oral rehydration treatment for diarrhea, latrine construction, prevention of water related diseases and proper use and storage of water in the home. Demonstrations were conducted on soak-away pit and latrine construction.

B. VWS Supervisory Training Course (Maseru)

Twelve supervisor candidates were instructed in a basic first-aid course conducted by Lesotho Red Cross from October to December.

C. Training of Trainers (Tsakholo)

Twenty seven trainers of village health workers from the Mafeteng district participated in a 2 day seminar in proper utilization of the new village health worker manual developed by Medex (Rural Health Project). The section on clean water and sanitation was presented by the health education coordinator. The participants were from the ministries of Agriculture, Education, Health and Rural Development.

D. Health Assistant Trainees (Seforong)

As part of their training, 12-health assistant trainees were placed in the Seforong area to complete village profile forms as an initial activity in a special project on sanitation. The Seforong Project is a comperative effort on the part of MINRUDEV and MOH.

6. Health Education Follow Up Workshop (Quthing)

A one day workshop was held in December 1983 at Masitise High School for the extension workers from the ministries of Agriculture, Education, Rural Development and Health on their coordination efforts on clean water and sanitation within their perspective areas in Quthing district.

VII. Maintenance

1. Summary:

Maintenance section personnel has stabilized with little turnover. A Mosotho mechanical engineer, Mr. Ben Rafoneke, counterpart to the Project Maintenance Engineer heads a cadre of vehicle and system repair personnel totalling 24 people. The section is responsible for all VWS vehicle service and repair, water system repair, and drill rig repair. In addition the Maseru workshop has undertaken service and repair responsibility for Clinics and Footbridges, Renewable Energy Technology, and the Rural Sanitation Project. We believe that VWS has one of the finest vehicle maintenance facilities in Lesotho with qualified mechanics good tools and equipment. During 3-quarters of GOL FY 83/84 a total of M74,000 has been spent on spare parts for GOL and USAID vehicles. This averages M230.00 per month per vehicle but seems reasonable considering road conditions and the range of vehicle size (from 8-ton trucks to pick ups).

TABLE M-1

Summary of Maintenance and Repair
Activities for the Quarter

Vehicles:	188
Drill Rigs:	67
Windmills:	36
Diesel Engines:	18
Water Systems:	122

2. Vehicle Maintenance

The workload in the Maseru workshop has increased substantially. A new mechanic has been hired and, starting in January, one of the field mechanics will be utilized part time in the workshop. Some work will be transferred to the two Regional workshops if practical.

The majority of services and/or repairs are completed on a same day basis. All jobs are scheduled into the shop using a job card system. Some delays were experienced in having vehicle repaired promptly due to lack of order books in the first half of the quarter. Other delays are attributable to waiting for spare parts.

The spare parts inventory is slowly building as experience is gained in the types of "common" spares required. The VWS fleet now contained International Harvester, Mercedes, Leyland and Toyota heavy duty trucks, Landrover, Toyota and Datsun light duty trucks.

An agreement has been reached with one of the parts suppliers where by the supplier will furnish spare parts on the strength of a requisition. At the end of each week a confirmation order is written to cover the parts collected during the week. Control and monitoring is maintained by the maintenance engineer to guard against abuse.

3. Transport:

There were three vehicle accidents recorded during the quarter. Two were minor and one resulted in the probable total loss of a Project provided pick-up. Disciplinary action has been recommended where appropriate.

An 8-ton Mercedes truck purchased with GOL funds has been received and assigned to the Northern Region in Maputsoe.

We are attempting to get old X-plate trucks replaced by Government. Preliminary inquiries have indicated that there is no money plus a long waiting list from all Ministries for replacement vehicles. VWS has one 8-ton truck and 5 pick-ups that qualify for replacement.

4. System Maintenance:

Several mechanical pumping systems were installed during the quarter as a joint effort between district engineers, construction crews, mechanical design and maintenance crews. The maintenance section is responsible for mechanical design and installation of the engine, drive and pump. The construction section builds the pump house and installs the necessary piping.

The system maintenance team for the south region is scheduled to spend about three months in Qacha's Nek district beginning January 1984. There are five systems to be repaired during this period including silt box replacement, standpipes, and water taps. We would point out that some of these systems were constructed with plastic pipe several years ago which now requires replacement. Plastic pipe is not suitable for conditions in Lesotho.

VIII. Financial Management

1. A new two year Project work plan has been submitted to USAID for approval. Considerable revision of the Project budget has occurred since the beginning of work in May, 1981. The following table compares major budgetary line items:

Recommended Life of Project Budget
(in 000's U.S. Dollars)

<u>Item</u>	<u>Project Paper</u>	<u>1st Work Plan</u>	<u>2nd Work Plan</u>
A. Technical Assistance	2,202.7	3,185.5	3,459.0
B. Training	387.2	385.5	467.0
C. Commodities	7,602.2	6,651.2	5,654.0
D. Construction	476.1	1,011.7	994.4
E. Other Costs	1,473.9	1,295.1	1,530.0
F. Miscellaneous	0	0	37.7
TOTALS	12,142.1	12,529.9	12,142.1
	=====	=====	=====

Since the new work plan has not yet been approved by USAID, details of the revised budget will not be discussed. We do suggest, however, that Project funding will be sufficient to meet the goals and objectives established in the Project Paper.

2. Tables F-1 through F-4 give a clear statement of the financial position of the Project through December, 1983. Please note that the Life-of-Project budget figures shown in Table F-1 and F-3 are our recommendations from the new two year work plan which is still under consideration by USAID.

TABLE F-1
USAID PROJECT 632-0088
RURAL WATER AND SANITATION PROJECT
 Life Of Project Expenditure Report
 Quarter Ending DECEMBER, 1983
 (in 000's U.S. Dollars)

<u>Item</u>	<u>L.O.P.*</u> <u>Budget</u>	<u>Quarter</u>		<u>To Date</u>	
		<u>Committed</u>	<u>Expended</u>	<u>Committed</u>	<u>Expended</u>
A. <u>Technical Assistance</u>	<u>3,459.0</u>	0	<u>389.2</u>	<u>2,784.8</u>	<u>1,719.9</u>
B. <u>Training</u>	<u>467.0</u>	<u>28.5</u>	<u>24.8</u>	<u>141.6</u>	<u>130.6</u>
1. Participant (Overseas)	193.0	15.0	14.5	79.7	76.1
2, 3, 4. In-Country	100.0	0.9	2.9	29.9	28.1
4a. Water Minder Tool Kits	60.0	0	0	0	0
5. Public Health	114.0	12.6	7.4	32.0	26.4
C. <u>Commodities</u>	<u>5,564.0</u>	<u>517.5</u>	<u>581.5</u>	<u>2,358.8</u>	<u>1,982.7</u>
1. Drilling Equipment	303.9	25.4	30.5	151.6	151.2
2. Hand Pumps	1,094.6	(42.3)	0	289.1	20.1
3. Repair Parts, Syst. Maint.	124.0	4.7	4.3	48.6	43.6
4. Vehicles	463.2	0	0	368.2	355.0
5. Tools and Power Equipment	106.8	(.2)	19.2	76.6	76.7
6. Water Test Equipment	12.3	0	0	.4	.4
7. Pipes and Fittings and Materials	3,549.2	529.9	527.5	1,424.3	1,335.7

*Revised January 1, 1984

TABLE F-1 (Continued)

<u>Item</u>	<u>L.O.P. Budget</u>	<u>Quarter</u>		<u>To Date</u>	
		<u>Committed</u>	<u>Expended</u>	<u>Committed</u>	<u>Expended</u>
D. <u>Construction (FAR)</u>	<u>994.4</u>	<u>0</u>	<u>636.2</u>	<u>992.9</u>	<u>992.9</u>
E. <u>Other Costs</u>	<u>1,530.0</u>	<u>45.7</u>	<u>43.4</u>	<u>390.1</u>	<u>383.1</u>
1. <u>Vehicle Spare Parts</u>	189.0	5.8	3.5	85.2	73.2
2. <u>System Maint. Program</u>	383.3	15.4	15.4	139.9	139.9
3. <u>Temporary Wage Labor</u>					
a. <u>Masons</u>	825.0	24.5	24.5	146.5	146.5
b. <u>Local Hire</u>	133.0	0	0	18.5	18.5
F. <u>Miscellaneous</u>	<u>32.7</u>	<u>0</u>	<u>0</u>	<u>32.7</u>	<u>25.8</u>
GRAND TOTAL	<u>12,142.1</u>	<u>591.7</u>	<u>1,675.1</u>	<u>6,700.9</u>	<u>5,233.0</u>

TABLE F-1
RAD WATER AND SANITATION PROJECT
 1427-01-1-47
MARRIETTA/SHILADIA BUDGET REPORT NO. 33

REPORTING PERIOD: 23 OCTOBER 83 - 19 NOVEMBER 83
 CONTRACT NO.: AFR-0088-C-00C1025C00
 DATE WRITTEN: 08 DECEMBER 83
 CORRESPONDS TO STMT: 11-0743-83

	UNIT	A I P P	J E C T	B U D G E T P E R I O D		
				EXPENDED	SEPTEMBER 25, 1983 TO SEPTEMBER 30, 1984	EXPENDED THIS PERIOD
			DATE	BUDGET	TO DATE	
1. SALARIES:						
A. FIELD STAFF PROFESSIONAL	\$4	132.00	\$ 57,853.92	\$104,694.40	\$14,080.00	\$7,040.00
B. HOME OFFICE PROFESSIONAL		384.00	21,629.16	27,297.12	1,123.70	512.30
C. HOME OFFICE NON-PROFESSIONAL		88.00	10,187.64	24,300.39	246.01	218.69
D. FIELD OFFICE-ADMIN ASSISTANT		195.00	.00	13,600.00	.00	.00
TOTAL SALARIES		799.00	\$ 89,670.72	\$169,891.91	\$15,449.71	\$7,770.99
2. OVERHEAD:						
A. FIELD OFFICE	\$	327.00	\$ 22,785.35	\$83,516.00	\$12,165.12	\$6,082.56
B. HOME OFFICE		272.00	14,674.88	72,076.42	1,923.21	1,026.38
TOTAL OVERHEAD		599.00	\$ 37,460.23	\$155,592.42	\$14,088.33	\$7,108.94
3. SUBCONTRACTS:						
A. TECHNICAL	\$1.4	468.00	\$ 61,518.31	\$439,527.49	\$42,256.97	\$23,467.62
B. WELL DRILLING		150.00	16,760.00	9,140.00	.00	.00
TOTAL SUBCONTRACTS		618.00	\$ 78,278.31	\$448,667.49	\$42,256.97	\$23,467.62
4. ALLOWANCES						
A. POST DIFFERENTIAL		119.00	25,004.76	\$10,945.84	\$1,408.00	\$704.00
B. INTERNATIONAL TRAVEL PER DIEM		81.00	3,585.80	2,854.63	1,259.50	.00
C. DOMESTIC PER DIEM (D.C.)		44.00	810.80	1,258.15	.00	.00
D. DOMESTIC PER DIEM HOME OFFICE		26.00	962.35	264.00	.00	.00
E. LESOTHO PER DIEM		78.00	8,233.39	35,299.60	104.52	104.52
F. LESOTHO, FIRST ARRIVAL PER DIEM		50.00	1,611.87	.00	.00	.00
TOTAL ALLOWANCES		498.00	40,208.97	\$50,622.22	\$2,772.02	\$808.52
5. TRAVEL & TRANSPORTATION						
A. DOMESTIC	00.00		1,191.04	\$1,277.00	\$.00	\$.00
B. INTERNATIONAL	31.00		6,357.64	28,800.56	546.25	.00
C. UNACC. BAGGAGE	00.00		7,391.11	9,961.74	.00	.00
D. SHIPP. HHE & AUTO	40.00		7,843.20	15,668.26	2,387.22	2,387.22
E. STORAGE HHE	50.00		3,589.11	1,150.00	158.40	79.20
F. LOCAL TRANS.	00.00		3,078.12	1,000.00	.00	.00
G. R & R TRAVEL	00.00		1,113.20	8,746.80	.00	.00
TOTAL TRAVEL & TRANSPORTATION			27,563.42	\$66,604.36	\$3,092.07	\$2,466.47

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TABLE F-3

USAID PROJECT 632-0088

RURAL WATER AND SANITATION PROJECT

Life Of Project Local Advances Expenditure

Report: Month Ending December 31, 1983

Administered through Government of Lesotho Vote 715/005/53213

(in U.S. Dollars)

Sub Vote	Item	LOP Budget	Expenses To Date	LOP Budget Balance	Current Month Expenses
1	B.2: Training (in Country)	100,000	28,117	71,883	(764)
12	B.7: Training (IP) in Health	114,000	26,442	87,558	2,773
13	C.1: Drilling Equipment and Tools	163,000	34,876	128,124	(1,070)
4	C.3: Repair Parts (Syst. Maint.)	124,000	43,647	80,353	(797)
14	C.6: Water Test Equipment	12,300	323	11,977	(13)
6/12	C.7b: Const. Materials (Local)	733,000	129,549	603,451	(3,074)
	C.7d: Sanitation Const. Material (Local)	100,000		100,000	-
5	E. 1: Vehicle Maint:	139,000	78,226	110,774	(2,412)
3	E. 2: Syst. Maint. Support (Salaries)	383,000	139,922	243,078	15,372
8	E. 3a: Temporary Labor (Masons)	825,000	146,467	678,533	5,619
7	E. 3b: Temp. Labor (Local Hire)	133,000	17,928	115,072	(550)
		<u>2,876,300</u>	<u>645,497</u>	<u>2,230,803</u>	<u>15,084</u>

USAID Authorized Expenditure level:	922,965
USAID Advanced to Date:	702,722
Less Expenses:	645,497
Unexpended Balance:	57,225
Less Commitments:	80,250
Plus Available:	(23,025)

The undersigned hereby certifies that this claim is proper and correct for reimbursement under the terms of the Grant and that reimbursement has not or will not be requested from USAID or any other Grantor.

David L. Wadsworth
Morrison-Maierle, Inc.
Project Manager

Mr. S.T. Mota
Permanent Secretary
Ministry of Cooperatives
and Rural Development.

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TABLE F-4

RURAL WATER AND SANITATION PROJECT
GOVERNMENT OF LESOTHO COUNTERPART CONTRIBUTION

Counterpart Contribution Expenditure Report
 Quarter Ending DECEMBER, 1983

(In Maloti)

	Quarter		To Date	
	<u>Committed</u>	<u>Expended</u>	<u>Committed</u>	<u>Expended</u>
1. Maintenance Support Program	37,151	26,853	188,010	163,367
2. Administrative Support	4,328	4,328	31,433	31,433
3. Land and Utilities	-	60,382	299,257	290,647
4. Furnishings	-	-	22,506	22,506
5. Vehicle Operation	11,888	13,096	117,032	117,032
6. Village Self Help Labour (1)	102,000	102,000	244,000	244,000
7. Miscellaneous	<u>4,521</u>	<u>4,521</u>	<u>21,544</u>	<u>21,544</u>
GRAND TOTAL	159,888 =====	211,180 =====	923,782 =====	890,529 =====

1. The value of Village Self Help labor has previously been calculated at M25 per capita for gravity systems and M200 for each hand pump installed. We have found the per capita value for gravity systems to be too high. Our estimate based on observation (accurate daily accounting of village labor is nearly impossible to obtain) is M10 per capita. We have adjusted the previous life of project total, reported in the 10th quarterly report, from M383,700 to M142,000. The value for this quarter is based on M10 per capita for gravity and M200 per hand pump.

IX. Miscellaneous

1. Reports - Submissions - Approval

- The second two year Project work plan was submitted to USAID on 28 December, 1983.
- USAID approved the hire of Dr. Edward Clarke, NUL, for conducting the K.A.P. study.
- USAID approved implementation of an impact evaluation study. Mr. Steven Esrey, Cornell University, will conduct the study.
- USAID has approved the purchase of 500 additional hand pumps and is currently requesting a waiver from AID/Washington to proceed with the purchase.

2. Vacations and Home Leave

Allen Tudor, home leave : 2 Dec. 83 - 13 Jan 84

3. Conferences and Workshops

None

4. Foreign Travel

None.

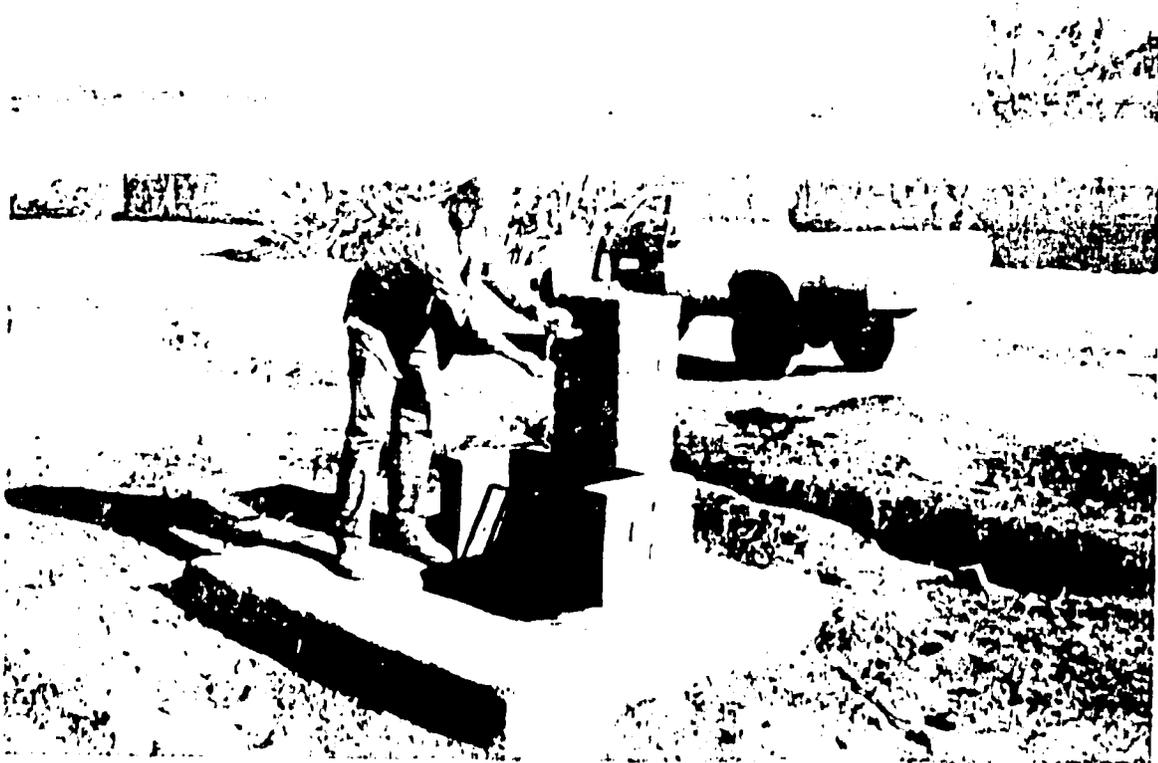

David L. Wadsworth, P.E.
Morrison-Maierle, Inc.
Project Manager
19 January, 1984.

A P P E N D I X 1

P R O J E C T P I C T U R E S



15 M³ RESERVOIR FROM NATIVE ROCK



WELL AT THE FARM HOUSE



TYPICAL
HAND PUMP



BRICK RESERVOIR
AND DIESEL PUMP
STATION



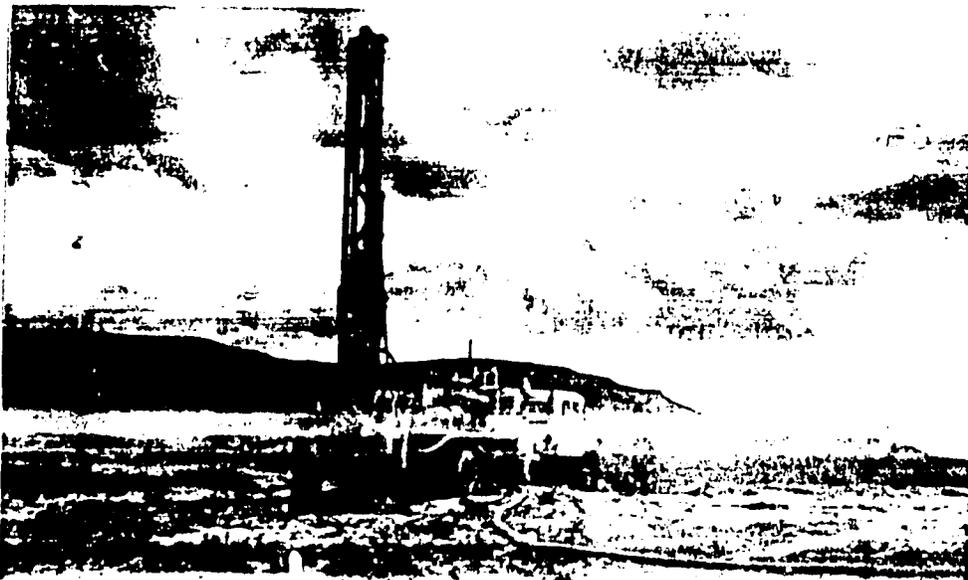
NATIVE SANDSTONE
RESERVOIR

EXAMPLES OF VILLAGE SELF-HELP LABOR





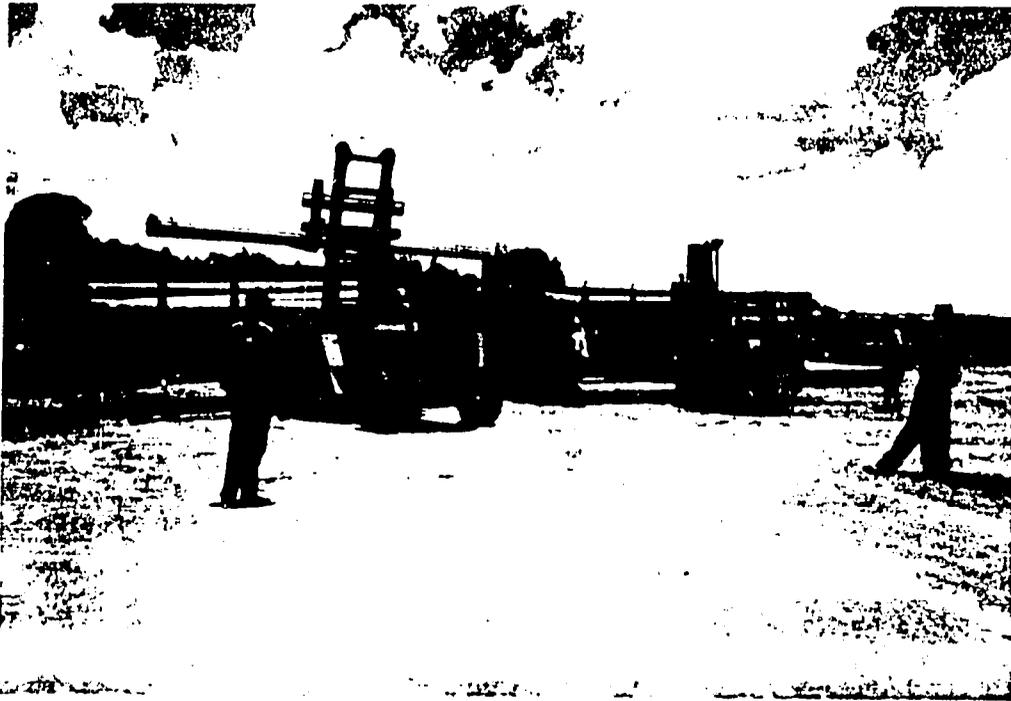
VW'S DRILL RIG
BEING RELOCATED.



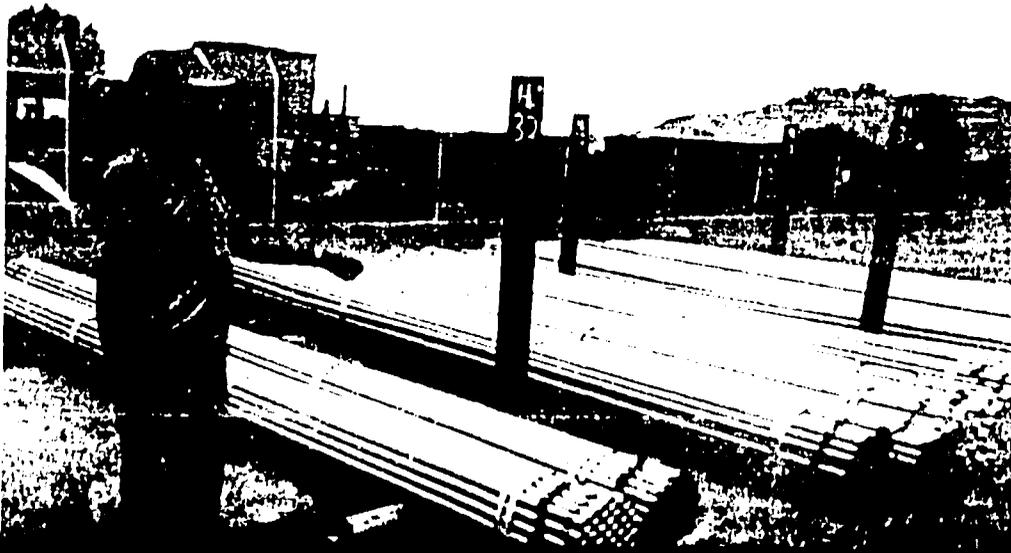
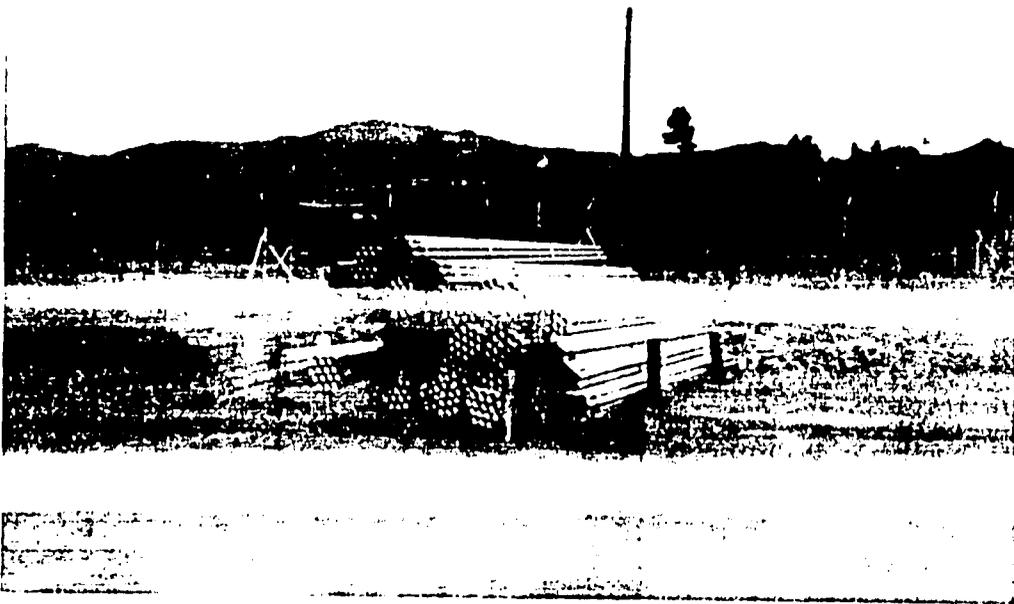
CONTRACT
DAILLER HIRED
BY CIDA.
(THE PROJECT
WILL PROVIDE
HAND PUMPS)



FRED ZCBRIST
(USAID/L ENGINEER)
AND WILLIS WETSTEIN
(MM) INSPECT
ROTARY DRILL RIG.



THE SECOND
800 TON
PIPE SHIPMENT
BEING OFF-
LOADED IN
MCNALE'S
HOEK



MCNALE'S HOEK
DISTRICT ENGINEER,
MIKE NTJA.



CLASS OF 104
WATERMINDERS
MAFETENG
DISTRICT



VWS DRILLING
FOREMEN AND
HAND PUMP
INSTALLATION
CREW. SIGN
READS: 97
BENEFICIARIES AND
130 HANDPUMPS
INSTALLED IN



VWS SUPERVISORY
COURSE ON FIELD
TRIP.

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