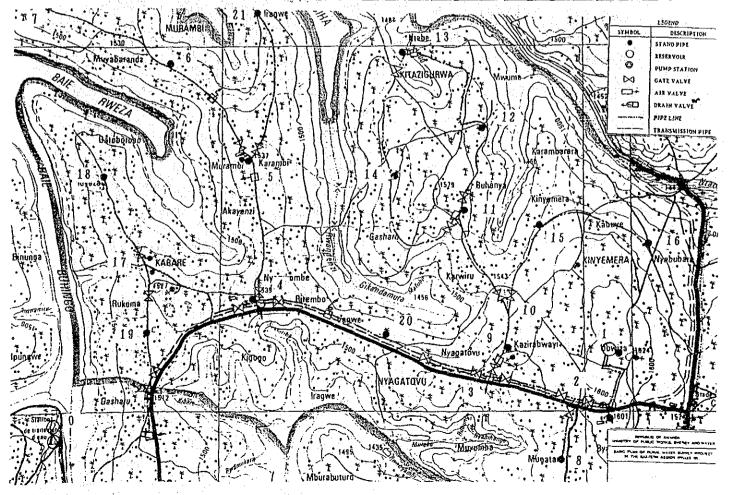
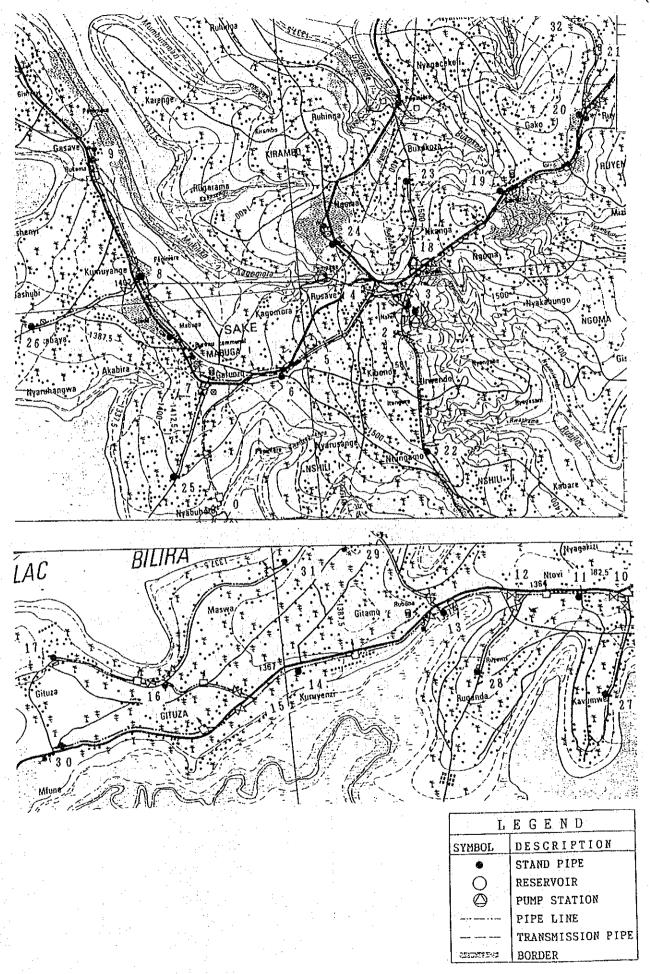
X: HYDRAULIC CALCULATION OF
SYSTEM 1 AND SYSTEM 2

| MUHAZ | | Dischar | se (m3 | /s) 0=. | 0.00689 | 596.0 | m3/dav | | | | |
|----------|------------------|------------------|--------------|----------------|----------|-----------|--------|-----------|-------------|---------|--------|
| | | Stand Pi | pe Un | it NO. | 16 | | | | | | |
| Start | G. L. | Total | End | G. L. | Distance | Discharge | Pipe | lead Loss | fotal llead | ressure | Remark |
| Point | | llead(m) | <u>Point</u> | (n) | (m) | (m3/s) | | | of E.P | | |
| | 1,620.0 | 1,610.0 | | 1,600.0 | 1,000 | 0.0069 | 150 | 1.844 | 1, 608. 2 | 8. 2 | |
| <u>2</u> | 1,600.0 | 1, 608, 2 | | 1,570.0 | 1,500 | 0.0060 | 150 | 2. 160 | 1,606.0 | 36.0 | |
| 3 | 1,570.0 | 1,606.0 | | 1,560.0 | 1, 300 | 0.0034 | 100 | 4. 789 | 1,601.2 | 41.2 | |
| 20 | 1,560.0 | 1,601,2 | | 1,560.0 | 1,500 | 0.0030 | 100 | 4.317 | 1, 596. 9 | 36. 9 | |
| | | 1, 596, 9 | | 1,550.0 | 1,800 | 0.0017 | 75 | 7.467 | 1, 589, 4 | 39.4 | |
| | | 1,589.4 | | 1,530.0 | 1,500 | 0.0009 | 75 | 1.726 | 1, 587. 7 | 57.7 | |
| 6 | <u>1, 530. 0</u> | 1, 587. 7 | 7 | 1,540.0 | 1,400 | 0,0004 | 75 | 0.447 | 1, 587. 2 | 47. 2 | |
| | | 1, 589. 4 | | 1, 520. 0 | 1, 800 | 0.0004 | 50 | 4. 139 | 1, 585. 3 | 65.3 | |
| | | 1, 608. 2 | | 1,600.0 | 800 | 0.0004 | 75 | 0.255 | 1,607.9 | 7.9 | |
| | | 1,606.0 | | 1, 570.0 | 500 | 0.0030 | 100 | 1.439 | 1,604.6 | 34.6 | |
| | | 1,604.6 | | 1, 560.0 | 500 | 0.0026 | 75 | 4. 392 | 1, 600. 2 | 40. 2 | |
| | | 1,600.2 | | 1, 570.0 | 1,800 | 0.0017 | 75 | 7.467 | 1, 592.7 | 22.7 | |
| | | <u>1, 592. 7</u> | 12 | 1, 540.0 | 1, 100 | 0.0009 | 50 | 9. 119 | 1,583.6 | 43.6 | |
| | | 1, 583, 6 | 13 | <u>1,530.0</u> | 1,400 | 0.0004 | 50 | 3. 219 | 1, 580. 4 | 50.4 | 100 |
| 11 1 | , 570.0 | <u>1, 592. 7</u> | 14 | 1, 550.0 | 1, 300 | 0.0004 | 50 | 2. 989 | 1, 589. 7 | 39.7 | |
| 10 1 | , 560.0 | 1,600.2 | 15 | 1, 560. 0 | 1,700 | 0.0009 | 75 | 1.956 | 1, 598. 2 | 38. 2 | |
| 15 | , 560.0 | 1,598.2 | 16 | 1,560.0 | 1,700 | 0.0004 | 50 | 3.909 | 1, 594. 3 | 34.3 | |
| 4 1 | , 560, 0 | 1,596.9 | 17 | <u>1,540.0</u> | 1, 500 | 0.0004 | 75 | 0.479 | 1, 596. 4 | 56.4 | |
| 17 1 | . 540. 0 | 1, 596.4 | 18 | 1, 530.0 | 1,600 | 0.0004 | 50 | 3.679 | 1, 592. 7 | 62.7 | |
| 18 1 | , 530.0 | 1,592.7 | 19 | 1,550.0 | 700 | 0.0004 | 75 | 0.223 | 1, 592. 5 | 42. 5 | A . |
| 14 1 | , 550.0 | 1, 589. 7 | 13 | 1, 550.0 | 1, 100 | 0.0004 | 50 | 2, 529 | 1, 587. 2 | 37. 2 | |
| | | | | | | | | | | | 7 |
| | | | | | | | | | | | |



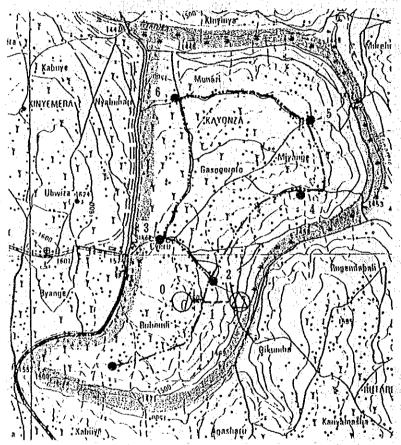
SAKE Discharge (m3/s) Q= 0.01031 891.1 m3/day

| OHILL | | Stand Pi | 1 . | | 26 | | | | | | |
|-------|-----------|-----------|-------|-----------|----------|-----------|------|------------|--------------------|----------|----------|
| Start | G. L. | Total | End | G. L. | Distance | Discharge | Pipe | ilead Loss | lotal llead | Pressure | Remark |
| Point | (m) | | Point | | (m) | (m3/s) | | | of E.P | lead (m) | |
| | | 1, 580, 0 | | 1,570.0 | 200 | 0,0103 | 150 | 0.776 | 1, 579, 2 | 9.2 | |
| | | 1,579.2 | | 1,560.0 | 500 | 0.0099 | 150 | 1.804 | 1, 577, 4 | 17.4 | |
| - | | 1, 577. 4 | | 1,530.0 | 500 | 0.0083 | 150 | 1.307 | 1, 576. 1 | 46.1 | |
| 4 | | 1, 576, 1 | 5 | 1,480.0 | 800 | 0.0083 | 150 | 2.091 | 1, 574.0 | 94.0 | |
| 5.1 | | 1, 480.0 | 6 | 1, 440.0 | 1, 200 | 0.0079 | 100 | 20.644 | 1, 459. 4 | 19.4 | |
| | | 1, 459, 4 | 7 | 1, 430, 0 | 1,500 | 0.0063 | 100 | 17.077 | 1, 442. 3 | 12.3 | |
| | | 1, 442. 3 | | 1, 410.0 | 1,700 | 0.0052 | 100 | 13. 181 | 1, 429. 1 | 19.1 | |
| | | 1, 429, 1 | | 1, 380. 0 | 2,500 | 0.0044 | 100 | 14. 230 | 1, 414. 9 | 34.9 | |
| | | 1 414 9 | | 1,370.0 | 3,800 | 0.0040 | 100 | 18.134 | 1, 396. 7 | 26.7 | <u> </u> |
| | | 1, 396. 7 | | 1, 370.0 | 1, 100 | 0.0036 | 100 | 4. 320 | 1, 392. 4 | 22.4 | |
| | | 1, 392. 4 | 12 | 1, 370.0 | 1,000 | 0.0036 | 100 | 3. 927 | 1, 388. 5 | 18.5 | |
| | | 1, 388. 5 | | 1, 370.0 | 1, 200 | 0.0032 | 100 | 3.790 | 1, 384. 7 | 14.7 | |
| | | 1, 384.7 | | 1, 360.0 | 2,500 | 0,0020 | 75 | 13.433 | 1, 371. 3 | 11.3 | |
| | | 1, 371. 3 | | 1, 360. 0 | 1,000 | 0.0016 | 75 | 3.556 | 1, 367. 7 | 7.7 | |
| | | 1, 367. 7 | | 1, 350.0 | 1,100 | 0.0012 | 75 | 2. 297 | 1, 365. 4 | 15.4 | |
| 16 | 1,350.0 | 1, 365.4 | | 1,350.0 | 1,600 | 0.0004 | 50 | 3. 154 | 1, 362. 3 | 12.3 | |
| 16 | 1, 350. 0 | 1, 365. 4 | 31 | 1, 350.0 | 2,300 | 0.0004 | 50 | 4, 534 | 1,360.9 | 10.9 | |
| 15 | 1.360.0 | 1, 367. 7 | 30 | 1, 350.0 | 2,700 | 0.0004 | 50 | 5. 322 | 1, 362. 4 | 12.4 | |
| 13 | 370.0 | 1, 384.7 | 29 | 1, 370.0 | 1,000 | 0.0004 | 50 | 1.971 | 1, 382. 7 | 12.7 | |
| 12 | 1, 370.0 | 1, 388. 5 | 28 | 1,380.0 | 1, 100 | 0.0004 | 50 | 2. 168 | | 6.3 | |
| 10 | 1, 370. 0 | 1, 396. 7 | 27 | 1, 390.0 | 600 | 0.0004 | 50 | 1.183 | 1, 395. 6 | 5.6 | |
| 8 | , 410. 0 | 1, 429. 1 | 26 | 1, 390.Q | 1,300 | 0.0004 | 50 | 2.562 | 1, 426. 5 | 36. 5 | |
| 7 1 | 1, 430. 0 | 1, 442. 3 | 25 | 1,400.0 | 1,400 | 0.0004 | 50 | 2.760 | 1, 439, 5 | 39. 5 | |
| 4 1 | 530.0 | 1, 576. 1 | 24_ | 1,510.0 | 1,000 | 0.0004 | 50 | 1.971 | 1, 574. 1 | 64.1 | |
| 2 1 | , 570.0 | 1,579.2 | 22 | 1,530.0 | 1,800 | 0.0004 | 50 | 3.548 | 1,575.7 | 45.7 | |
| 3 1 | , 560.0 | 1, 577. 4 | 18 | 1,510.0 | 1,700 | 0.0020 | 75 | 9.135 | 1, 568. 3 | 58.3 | |
| 18 1 | , 510. 0 | 1,568.3 | 19 | 1, 530.0 | 1,500 | 0.0016 | 75 | 5. 334 | 1, 563.0 | 33.0 | |
| 19 1 | , 530.0 | 1,563.0 | 20 | 1, 520.0 | 1,800 | 0.0012 | 75 | 3, 759 | 1, 559. 2 | 39. 2 | |
| 20 1 | , 520. 0 | 1, 559. 2 | 21 | 1,510.0 | 1, 100 | 0.0004 | 50 | 2. 168 | 1, 557.0 | 47.0 | |
| - | | 1,559.2 | 32 | 1, 510.0 | 900 | 0.0004 | 50 | 1.774 | 1, 557. 4 | 47.4 | |
| | | 1, 568. 3 | 23 | 1, 520.0 | 1,100 | 0.0004 | 50 | 2. 168 | 1, 566. 1 | 46.1 | |
| | | | | | | | | <u> </u> | | <u> </u> | |
| | | | | | | | | | and the species of | | F |



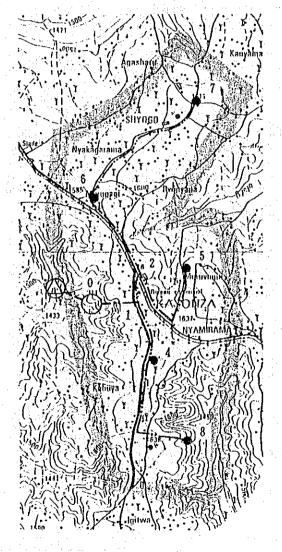
| 7/41/03/07 4 4 | Discharge | /n /.\ n | 0 00122 | 115.4 m3/day |
|----------------|-------------|------------|-----------|---------------|
| KAYONZA-1 | Discharge | (M3/S/ V= | U. UVI 33 | 110.4 110/983 |
| 11112 411011 | 2.001102.00 | 4 | | |
| * | | 44 4 4 370 | | |

| | Stand Pi | pe Vn | it NO. | | | | | | وخمابيسيسيم | |
|----------|--|---|--|----------|---|---|---|--|--|--|
| G. L. | Total | End | G. L. | Distance | Discharge | Pipe | | fotal Head | ressure | Remark |
| (m) | | Point | (m) | (m) | (m3/s) | Dia.(m) | (m) | of E.P | lead (m) | |
| . 600. 0 | 1, 600.0 | 1 | 1, 590.0 | 120 | 0.0013 | 75 | 0.310 | 1, 599, 7 | 9.7 | |
| | | 2 | 1, 570.0 | 300 | 0.0011 | 75 | 0, 554 | 1, 599. 1 | | |
| | | 3 | 1, 580.0 | 800 | 0.0004 | 50 | 1, 952 | 1, 597. 2 | 17, 2 | |
| | | 6 | 1,540.0 | 2, 100 | 0.0002 | 30 | 17, 107 | 1, 580. 1 | 40.1 | |
| | | | | 1,700 | 0.0004 | 50 | 4. 149 | 1, 595. 0 | 15.0 | |
| | | 5 | 1, 570. 0 | 1, 200 | 0.0002 | 30 | 9.776 | 1, 585. 2 | 15. 2 | |
| | | 7 | 1, 560, 0 | 1,700 | 0.0002 | 30 | 13.849 | 1, 585.8 | 25.8 | |
| | | 6 | 1, 540. 0 | 1, 900 | 0.0002 | 30 | 15. 478 | 1, 569, 7 | 29, 7 | |
| | | | | | | 1.0 | | | | |
| | | | | | | | | : | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | G. L. (m) , 600. 0 , 590. 0 , 570. 0 , 580. 0 , 580. 0 , 590. 0 | G.L. Total (m) Head(m) ,600.0 1,600.0 ,590.0 1,599.7 ,570.0 1,599.1 ,580.0 1,597.2 ,570.0 1,599.1 ,580.0 1,595.0 ,590.0 1,599.7 | G. L. Total End (m) Head(m) Point , 600. 0 1, 600. 0 1 , 590. 0 1, 599. 7 2 , 570. 0 1, 599. 1 3 , 580. 0 1, 597. 2 6 , 570. 0 1, 599. 1 4 , 580. 0 1, 595. 0 5 , 590. 0 1, 599. 7 7 | (m) | G. L. Total End G. L. Distance (m) Head(m) Point (m) (m) , 600. 0 1, 600. 0 1 1, 590. 0 120 , 590. 0 1, 599. 7 2 1, 570. 0 300 , 570. 0 1, 599. 1 3 1, 580. 0 800 , 580. 0 1, 597. 2 6 1, 540. 0 2, 100 , 570. 0 1, 599. 1 4 1, 580. 0 1, 700 , 580. 0 1, 595. 0 5 1, 570. 0 1, 200 , 590. 0 1, 599. 7 7 1, 560. 0 1, 700 | G. L. Total End G. L. Distance Discharge (m) Head (m) Point (m) (m) (m3/s) . 600.0 1.600.0 1 1.590.0 120 0.0013 . 590.0 1.599.7 2 1.570.0 300 0.0011 . 570.0 1.599.1 3 1.580.0 800 0.0004 . 580.0 1.597.2 6 1.540.0 2.100 0.0002 . 570.0 1.599.1 4 1.580.0 1.700 0.0002 . 580.0 1.595.0 5 1.570.0 1.200 0.0002 . 590.0 1.599.7 7 1.560.0 1.700 0.0002 | G. L. Total End G. L. Distance Discharge Pipe (m) Head(m) Point (m) (m) (m3/s) Dia. (m) 600.0 1,600.0 1 1,590.0 120 0.0013 75,590.0 1,599.7 2 1,570.0 300 0.0011 75,570.0 1,599.1 3 1,580.0 800 0.0004 50,580.0 1,597.2 6 1,540.0 2,100 0.0002 30,570.0 1,599.1 4 1,580.0 1,700 0.0004 50,580.0 1,595.0 5 1,570.0 1,200 0.0002 30,590.0 1,595.0 5 1,570.0 1,200 0.0002 30,590.0 1,599.7 7 1,560.0 1,700 0.0002 30 | G.L. Total End G.L. DistanceDischarge Pipe Head Loss (m) Head(m) Point (m) (m) (m3/s) Dia. (m) (m) (m3/s) Dia. (m) (m) (m3/s) Dia. (m) (m) (m3/s) Dia. (m) (m) (m) (m) (m) (m) (m3/s) Dia. (m) (m) (m) (m) (m) (m3/s) Dia. (m) | G. L. Total End G. L. Distance Discharge Pipe Head Loss fotal Head (m) Head (m) Point (m) (m) (m3/s) Dia (m) (m) Of E. P. 600. 0 1,600. 0 1 1,590. 0 120 0.0013 75 0.310 1.599. 7,590. 0 1,599. 7 2 1,570. 0 300 0.0011 75 0.554 1,599. 1 ,570. 0 1,599. 1 3 1,580. 0 800 0.0004 50 1.952 1,597. 2 ,580. 0 1,597. 2 6 1,540. 0 2,100 0.0002 30 17.107 1,580. 1 ,570. 0 1,599. 1 4 1,580. 0 1,700 0.0004 50 4.149 1,595. 0 ,580. 0 1,595. 0 5 1,570. 0 1,200 0.0002 30 9.776 1,585. 2 ,590. 0 1,599. 7 7 1,560. 0 1,700 0.0002 30 13.849 1,585. 8 | G.L. Total End G.L. Distance Discharge Pipe Head Loss Fotal Head Pressure (m) Head(m) Point (m) (m) (m3/s) Dia. (m) (m) of E.P. Head (m) 600.0 1,600.0 1 1,590.0 120 0.0013 75 0.310 1.599.7 9.7 ,590.0 1,599.7 2 1,570.0 300 0.0011 75 0.554 1,599.1 29.1 ,570.0 1,599.1 3 1,580.0 800 0.0004 50 1.952 1,597.2 17.2 ,580.0 1,597.2 6 1,540.0 2,100 0.0002 30 17.107 1,580.1 40.1 ,570.0 1,599.1 4 1,580.0 1,700 0.0004 50 4.149 1,595.0 15.0 ,580.0 1,595.0 5 1,570.0 1,200 0.0002 30 9.776 1,585.2 15.2 ,590.0 1,599.7 7 1,560.0 1,700 0.0002 30 13.849 1,585.8 25.8 |



| LEGEND | | | | | | | | | | |
|-------------------------|-------------------|--|--|--|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | | | | | | | | | |
| • | STAND PIPE | | | | | | | | | |
| 0 | RESERVOIR | | | | | | | | | |
| | PUMP STATION | | | | | | | | | |
| , | PIPE LINE | | | | | | | | | |
| | TRANSMISSION PIPE | | | | | | | | | |
| escr it eert | BORDER | | | | | | | | | |

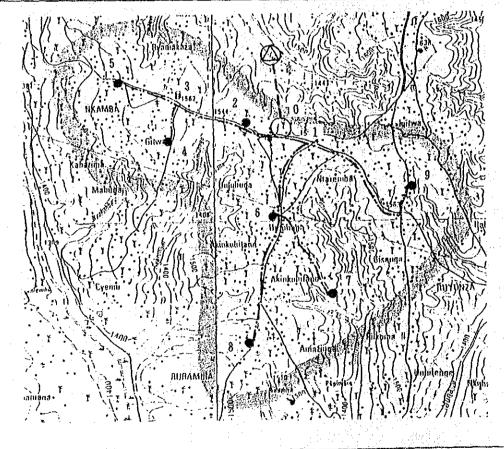
| KAYONZA-2 | Discharg | e (m3 | /s) Q= | 0.00106 | 92. 3 | m3/day | | • | | |
|---------------|-----------|-------|----------|----------|-----------|---------|----------------------|-------------|----------|--------|
| i <u>i de</u> | Stand Pi | pe Un | it NO. | 5 | | - | معمد و أروي مروي الم | : | | |
| Start G. L. | Total | End | G. L. | Distance | Discharge | Pipe | llead Loss | Total llead | Pressure | Remark |
| Point (m) | Head(m) | Point | (m) | (n) | (m3/s) | Dia.(m) | (m) | of E.P | lead (m) | |
| 0 1,625.0 | 1,625.0 | 1 | 1,610.0 | 500 | 0.0011 | 50 | 6.161 | 1, 618.8 | 8.8 | |
| 1 1,610.0 | 1,618.8 | 2 | 1,600.0 | 500 | 0.0006 | 50 | 2.395 | 1,616.4 | 16.4 | |
| 2 1,600.0 | 1,616.4 | 5 | 1,590.0 | 1,750 | 0.0002 | 30 | 13. 214 | 1,603.2 | 13.2 | |
| 2 1,600.0 | 1,616.4 | 6 | 1,590.0 | 1, 300 | 0.0004 | 50 | 2. 941 | 1,613.5 | 23.5 | |
| 6 1,590.0 | 1, 613, 5 | 7 | 1,590.0 | 2, 100 | 0.0002 | 30 | 15.856 | 1, 597. 6 | 7.6 | |
| 1 1,610.0 | 1,618.8 | 4 | 1,600.0 | 900 | 0.0002 | 30 | 6.796 | 1,612.0 | 12.0 | |
| 4 1,600.0 | 1,612.0 | 8 | 1, 575.0 | 1,000 | 0.0002 | 30 | 7.551 | 1,604.5 | 29.5 | |
| | | | 1 1 | | | | | | | |
| s i s ii | | | 1.3 | | | | | 1.5 | | |
| | | 1.25 | 7 | | | | **** | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |



| <u></u> | |
|----------|-------------------|
| I, | EGEND |
| SYMBOL ' | DESCRIPTION |
| • 1 | STAND PIPE' |
| · O, | RESERVOIR |
| | PUMP STATION |
| | PIPE LINE |
| | TRANSMISSION PIPE |
| 数の数数を対 | BORDER |

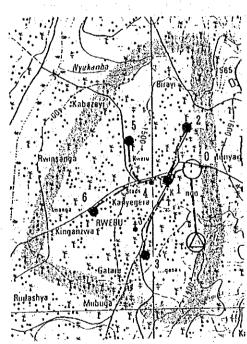
| KABARONDO | Discharge (m3/s) | Q= 0.00177 | 153.3 m3/day |
|-----------------------|------------------|------------|--|
| and the second second | | NA A | and the second of the second of the second |

| - | | <u>Stand Pi</u> | <u>pe Un</u> | it NO | | | | | | أحسنا | |
|-------|-----------|-----------------|--------------|-----------|----------|--------|-------|---------|-------------|----------|--------|
| Start | G. L. | Total | End | G. L. | Distance | | | | Total llead | Pressure | Remark |
| Point | (m) | llead (m) | Point | (m) | (m) | (m3/s) | | | of E.P | | |
| 0 | 1,580.0 | 1,580.0 | 1 | 1,570.0 | 30 | 0.0010 | 75 | 0,047 | 1,580.0 | 10.0 | |
| 1 | 1,570.0 | 1, 580.0 | 9 | 1,550.0 | 1, 400 | 0.0003 | 30 | 14, 501 | 1, 565. 5 | 15.5 | 11 kg |
| 1 | 1, 570.0 | 1,580.0 | 6 | 1, 570, 0 | 1, 150 | 0.0005 | 50 | 3.568 | 1, 576, 4 | 6.4 | |
| 6 | 1, 570.0 | 1, 576. 4 | 7 | 1, 500.0 | 1, 100 | 0.0003 | 30 | 11.394 | 1, 565.0 | 65.0 | |
| | 1,570.0 | | 8 | 1,510.0 | 1,500 | 0.0003 | 30 | 15.537 | 1, 560, 8 | 50.8 | |
| | | 1, 580.0 | 2 | 1, 550.0 | 550 | 0.0008 | 50 | 3.613 | 1, 576. 4 | 26.4 | |
| | | 1, 576, 4 | 3 | 1.550:0 | 400 | 0.0005 | 30 | 14, 936 | 1, 561. 5 | 11.5 | |
| | 1, 550.0 | | 4 | 1,550.0 | 300 | 0.0003 | 30 | 3. 107 | 1, 558. 3 | 8.3 | |
| | 1, 550, 0 | | | 1,540.0 | 350 | 0.0003 | 30 | 3. 825 | 1, 557. 8 | 17.8 | |
| | | | | | | | 100 | | | 3 1 | |
| | | | | | | | 7. 7. | | | | |
| | | | | | | | | | | | |
| | - 1 | | | | | 1.4 | | | | | |
| | | | | | | | | | | | ···- |



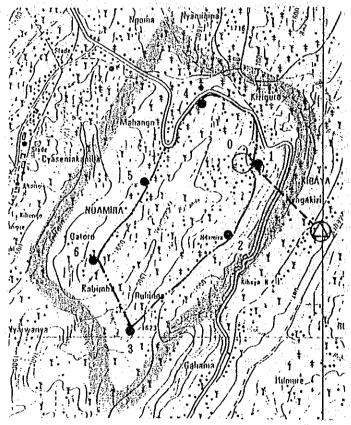
| LEGEND | | | | | | | | | |
|--------------|-------------------|--|--|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | | | | | | | | |
| • | STAND PIPE | | | | | | | | |
| | RESERVOIR | | | | | | | | |
| | PUMP STATION | | | | | | | | |
| | PIPE LINE | | | | | | | | |
| | TRANSMISSION PIPE | | | | | | | | |
| thirtheave : | BORDER | | | | | | | | |

| | | | | | es tare de traes | | | | | | | |
|---|---------------------|--|------------------------------|--|---|--|---|---|---|--|---|--|
| . | | | | | | | | | | | | |
| in a state of the | | | | ٠. | | | | | | ٠. | | |
| RUTON | | | | | 0.00107 5 | 92. 8 | m3/day | | | | | |
| 100 | | Total | End | | | | | 1 | | | Remark | |
| | | | | | | | | | | | | |
| | | | ł | | 130 | 0.0011 | 50 | 1.618 | | | | |
| 1 | 1, 530.0 | 1,538.4 | 2 | 1,520.0 | 800 | 0.0002 | 30 | 6, 101 | 1, 532, 3 | 12.3 | | |
| 11 | 1,530.0 | 1, 538. 4 | 3 | 1,510.0 | 1, 150 | 0.0002 | 30 | 8.770 | 1, 529. 6 | 19.6 | | |
| 1 | 1, 530.0 | 1, 538. 4 | 4 | 1,510.0 | 500 | 0.0004 | 30 | 13.747 | 1, 524. 6 | 14.6 | | |
| 4 | 1,510.0 | 1, 524. 6 | 5 | 1, 490.0 | 500 | 0.0002 | 30 | 3.813 | 1, 520. 8 | 30.8 | | |
| 4 | 1, 510.0 | 1,524.6 | 6 | 1,475.0 | 650 | 0.0002 | 30 | 4. 957 | 1, 519. 7 | 44.7 | | |
| | | | | · 5 | • | and the state | | | | - 1 | | |
| | | | | · | | | | | | 100 | | |
| - | 1 | | | | | | | 1. | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | 4 | |
| | Start Point 0 1 1 4 | Start G. L. Point (m) 0 1, 540.0 1 1, 530.0 1 1, 530.0 4 1, 510.0 | Stand Pi Start G.L. Total | Stand Pipe Un Start G. L. Total End Point (m) Head (m) Point 0 1,540.0 1,540.0 1 1 1,530.0 1,538.4 2 1 1,530.0 1,538.4 3 1 1,530.0 1,538.4 4 4 1,510.0 1,524.6 5 | Start G. L. Total End G. L. Point (m) Head(m) Point (m) 0 1,540.0 1,540.0 1 1,530.0 1 1,530.0 1,538.4 2 1,520.0 1 1,530.0 1,538.4 3 1,510.0 1 1,530.0 1,538.4 4 1,510.0 4 1,510.0 1,524.6 5 1,490.0 | Stand Pipe Unit NO. 5 Start G. L. Total End G. L. Distance Point (m) Head(m) Point (m) (m) 0 1,540.0 1,540.0 1,530.0 130 1 1,530.0 1,538.4 2,520.0 800 1 1,530.0 1,538.4 3,510.0 1,150 1 1,530.0 1,538.4 4,510.0 500 4 1,510.0 1,524.6 5,490.0 500 | Stand Pipe Unit NO. 5 Start G. L. Total End G. L. Distance Discharge (m) (m) (m) (m3/s) Point (m) Head (m) Point (m) (m) (m3/s) 0 1,540.0 1,540.0 1,530.0 130 0.0011 1 1,530.0 1,538.4 2 1,520.0 800 0.0002 1 1,530.0 1,538.4 3 1,510.0 1,150 0.0004 4 1,510.0 1,524.6 5 1,490.0 500 0.0002 | Stand Pipe Unit NO. 5 Start G. L. Total End G. L. Distance Discharge Pipe Point (m) Distance Discharge Pipe Pipe (m) Distance Discharge Pipe Pipe (m) Distance Discharge (m) Distanc | Stand Pipe Unit No. 5 Start G. L. Total End G. L. Distance Discharge (m) scharge (m) Pipe (m) Head Loss (m) Point (m) (m) | Stand Pipe Unit NO. 5 Start G. L. Total End G. L. Distance Discharge Pipe (m) Head Loss Total Head Point (m) (m) | Stand Pipe Unit NO. 5 Start G. L. Total End G. L. Distance Discharge Pipe (m) Head Loss Total Head Pressure Point (m) (m) (m3/s) Dia. (m) (m) of E.P. Head (m) 0 1,540.0 1,540.0 1,530.0 130 0.0011 50 1.618 1,538.4 8.4 1 1,530.0 1,538.4 2 1,520.0 800 0.0002 30 6.101 1,532.3 12.3 1 1,530.0 1,538.4 3 1,510.0 1,150 0.0002 30 8.770 1,529.6 19.6 1 1,530.0 1,538.4 4 1,510.0 500 0.0004 30 13.747 1,524.6 14.6 4 1,510.0 1,524.6 5 1,490.0 500 0.0002 30 3.813 1,520.8 30.8 | |



| | | L | EGEND |
|---|-------|-------------|-------------------|
| | : | SYMBOL | DESCRIPTION |
| | • | • | STAND PIPE |
| | | | RESERVOIR |
| | | | PUMP STATION |
| | : | | PIPE LINE |
| | | | TRANSMISSION PIPE |
| | | BESTER TANK | BORDER |
| er en | | | |
| | | | |
| | | | |
| | x - 7 | | • |
| | | | |

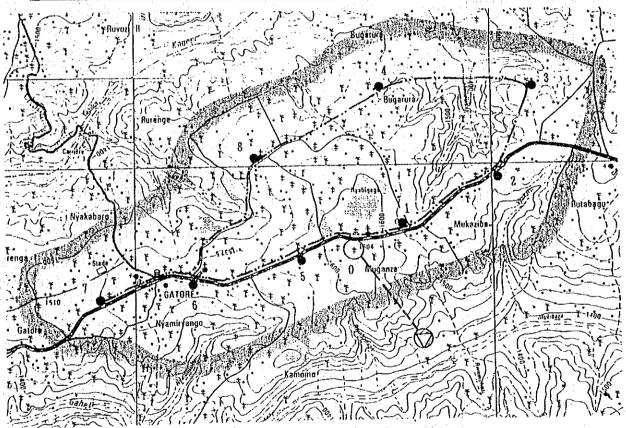
| BIREN | IGA | Discharg | e (m3 | 3/s) Q= | 0.00103 | 89. 5 | m3/day | : · · | | | |
|-------|----------|-----------|-------|----------|----------|-----------|---------|------------|------------|--|-----------------|
| r | | Stand Pi | pe Un | it NO. | 6 | | | | | | |
| Start | G. L. | Total | End] | G. L. | Distance | Discharge | Pipe | llead Loss | Total Head | Pressure | Remark |
| Point | (m) | llead(m) | Point | (m) | (m) | (m3/s) | Dia (m) | (m) | of E. P | lead (m) | |
| 0 | 1,605.0 | 1,605.0 | 1 | 1,590.0 | 100 | 0.0010 | 50 | 1, 164 | 1, 603, 8 | 13.8 | |
| 1 | 1, 590.0 | 1,603.8 | 2 | 1,570.0 | 1, 200 | 0.0003 | 30 | 22. 021 | 1, 581. 8 | 11.8 | |
| 2 | 1,570.0 | 1, 581. 8 | 3 | 1,560.0 | 1,800 | 0.0002 | 30 | 9, 163 | 1, 572. 7 | 12.7 | |
| 1 | 1, 590.0 | 1,603.8 | 4 | 1, 590.0 | 1, 100 | 0.0005 | 50 | 3, 552 | 1,600.3 | 10.3 | |
| 4 | 1, 590.0 | 1,600.3 | 5 | 1, 550.0 | 1, 300 | 0.0003 | 30 | 23.856 | 1, 576, 4 | 26.4 | |
| 5 | 1, 550.0 | 1, 576. 4 | 6 | 1, 530.0 | 1, 300 | 0.0002 | 30 | 6.617 | 1, 569. 8 | 39.8 | |
| 6 | 1, 530.0 | 1, 569. 8 | 3 | 1,560.0 | 800 | 0.0002 | 30 | 4.072 | 1, 565. 7 | 5.7 | |
| | | | | | | : ' ' | 1 1 | | | | |
| | | | | | | | | | | 11 11 11 11 11 11 11 11 11 11 11 11 11 | |
| | : ' | | | | | : | | le i | | | |
| | | | | | | 1 1 1.1 | | | | | Special Control |
| 1 | | | | | | | | | | | |



| L | E G E N D |
|----------|-------------------|
| SYMBOL | DESCRIPTION |
| • | STAND PIPE |
| 0 | RESERVOIR |
| | PUMP STATION |
| | PIPE LINE |
| | TRANSMISSION PIPE |
| Greenska | BORDER |

RUSUMO-1 Discharge (m3/s) Q= 0.00227 196.8 m3/day

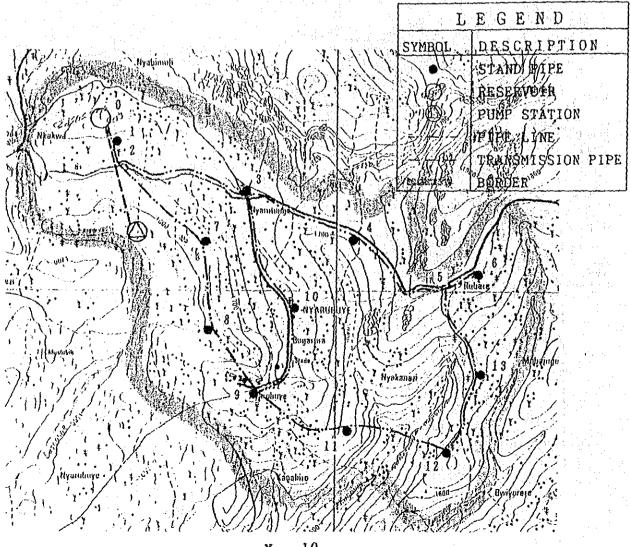
| | | <u>Stand Pi</u> | <u>pe Un</u> | it NO. | 8 | | | | | | |
|-------|----------|-----------------|--------------|----------|----------|-----------|---------|------------|-------------|----------|--------|
| Start | G. L. | Total | End | G. L. | Distance | Discharge | Pipe | llead Loss | lotal llead | Pressure | Remark |
| Point | (m) | llead (m) | Point | (m) | (m) | (m3/s) | Dia.(m) | (m) | of E.P | lead (m) | |
| 0 | 1,600.0 | 1,600.0 | 1 | 1,570.0 | 650 | 0.0009 | 75 | 0.735 | 1, 599. 3 | 29, 3 | |
| 1 | 1,570.0 | 1, 599, 3 | 2 | 1,570.0 | 1,550 | 0.0006 | 50 | 5. 964 | 1, 593, 3 | 23. 3 | |
| 2 | 1,570.0 | 1, 593.3 | 3 | 1,570.0 | 1, 350 | 0.0003 | 30 | 17. 339 | 1, 576.0 | 6.0 | |
| 0 | 1,600.0 | 1,600.0 | 5 | 1, 580.0 | 800 | 0.0014 | 75 | 2. 328 | 1, 597. 7 | 17.7 | |
| 5 | 1,580.0 | 1,597.7 | 6 | 1,550.0 | 1, 550 | 0.0011 | 50 | 21. 499 | 1, 576. 2 | 26. 2 | |
| 6 | 1,550.0 | 1, 576. 2 | 8 | 1,540.0 | 1, 150 | 0.0006 | 50 | 4. 425 | 1, 571. 7 | 31.7 | · |
| 8 | 1,540.0 | 1, 571. 7 | 4 | 1,540.0 | 2,050 | 0.0003 | 30 | 26. 329 | 1, 545. 4 | 5.4 | |
| 6 | 1, 550.0 | 1,576.2 | 7 | 1,530.0 | 2, 100 | 0.0003 | 30 | 26.972 | 1, 549. 2 | 19. 2 | |
| 3 | 1,570.0 | 1, 576, 0 | 4 | 1, 540.0 | 1, 900 | 0.0003 | . 30 | 24. 403 | 1, 551. 6 | 11. 6 | |
| | | - | | | | | | | | | |
| 2.00 | | | | | | | | | | | |
| | | | 11.7 | | | 44.47.141 | · . | | | Territ | |
| | | | | | | -1 - | 11. | | | | |



| · · · · · · · · · · · · · · · · · · · | |
|---------------------------------------|-------------------|
| L | EGEND |
| SYMBOL | DESCRIPTION |
| • | STAND PIPE |
| | RESERVOIR |
| | PUMP STATION |
| | PIPE LINE |
| | TRANSMISSION PIPE |
| etcassen: | BORDER |

| | | | | | 1 |
|--------------|---------------|---------|-----|----------|-----------------|
| RUSUMO-2 | Discharge | / A/.) | ^ | 0.00001. | 228. 9 m3/day |
| K1153115K1~2 | 111 500 61 60 | 10.77 | []= | 0 00264 | 77X 4 BA70BY |
| Trooping 8 | n r gontar Po | CHOL OL | ų. | 0100004 | DECT O HOT WOOD |

| Start G. L. Total Bnd G. L. DistanceDischarge Pipe Head LossTotal Head Pressure Point (m) Head(m) Point (m) (m) (m3/s) Dia. (m) (m) of E. P Head (m) 0 1, 755. 0 1, 755. 0 1 1, 740. 0 250 0.0026 100 0.565 1, 754. 4 14. 4 | Remark |
|--|-------------|
| the state of the s | |
| 0 1 755 0 1 755 0 1 10 740 0 250 0 0026 100 0 565 1 754 4 14.4 | |
| 1 0 H 100. 0 H 100. 0 1 1 H 120. 0 1 000 1 0. 000 1 X0 1 0. 000 1 X1 0. 00 1 | |
| 1 1,740.0 1,754.4 2 1,740.0 300 0.0024 100 0.569 1,753.9 13.9 | Augus (ed.) |
| 2 1, 740, 0 1, 753, 9 3 1, 740, 0 1, 400 0, 0019 75 7, 130 1, 746, 7 6.7 | |
| 3 1,740.0 1,746.7 4 1,720.0 1,600 0.0010 50 16.284 1,730.5 10.5 | |
| 4 1, 720. 0 1, 730. 5 5 1, 710. 0 1, 000 0. 0007 50 5. 977 1, 724. 5 14. 5 | |
| 5 1,710,0 1,724.5 6 1,710.0 500 0.0002 50 0.392 1,724.1 14.1 | .i. |
| 5 1, 710. 0 1, 724. 5 13 1, 700. 0 1, 800 0. 0005 50 5. 082 1, 719. 4 19. 4 | |
| 13 1, 700. 0 1, 719. 4 12 1, 670. 0 1, 200 0. 0002 50 0. 940 1, 718. 5 48. 5 | |
| 2 1, 740. 0 1, 753. 9 7 1, 670. 0 1, 500 0, 0005 30 50, 959 1, 702. 9 32, 9 | |
| 7 1, 670. 0 1, 702. 9 8 1, 680. 0 1, 100 0, 0002 30 10, 366 1, 692. 5 12. 5 | |
| 3 1, 740. 0 1, 746. 7 10 1, 740. 0 1, 300 0. 0007 75 1. 079 1, 745. 7 5. 7 | |
| 10 1, 740. 0 1, 745. 7 9 1, 730. 0 1, 100 0, 0005 50 3, 105 1, 742. 6 12. 6 | |
| 9 1, 730. 0 1, 742. 6 11 1, 680. 0 1, 500 0.0005 30 50. 959 1, 691. 6 11. 6 | 1 |
| 9 1, 730. 0 1, 742. 6 8 1, 700. 0 2, 050 0. 0002 30 19. 319 1, 723. 2 23. 2 | - 1 |
| 11 11, 680. 0 11, 691. 6 12 11, 670. 0 11, 600 0. 0002 30 15. 078 11, 676. 5 6. 5 | |
| | |
| | |
| | |



| RUSUMO-3 | Discharg | e (m3/s) Q= | 0.00226 | 196.1 | m3/day | | | | |
|-------------|-------------|--------------|----------|-----------|-------------------|-----------|------------|--------------|---------|
| | | pe Unit NO. | 15 | 1. 141 | | 44.5 | | | |
| Start G. L. | Total | End G. L. | Distance | Discharge | Pipe | Head Loss | Total Head | Pressure | Remark |
| Point (m) | | Point (m) | (m) | (m3/s) | Dia. (<u>m</u>) | (m) | of E.P | lead (m) | |
| | 0 1, 550.0 | | 2,700 | 0.0026 | 100 | 5. 782 | 1, 544. 2 | 94. 2 | 4. |
| 1 1,450. | 0 1,544.2 | 2 1, 450.0 | 500 | 0.0020 | 100 | 0.652 | 1,543.6 | 93.6 | |
| 2 1, 450. | 0 1, 543.6 | 3 1, 450.0 | 2,800 | 0.0018 | 100 | 3. 148 | 1,540.4 | 90.4 | |
| 3 1, 450. | 0 1,540.4 | 4 1, 440.0 | 700 | 0.0014 | 75 | 1.876 | 1, 538. 5 | 98.5 | |
| 4 1, 440. | 0 1,538.5 | 5 1, 425.0 | 3, 300 | 0.0012 | 50 | 51. 239 | 1, 487. 3 | 62.3 | <u></u> |
| 5 1, 425. | 0 1,487.3 | 6 1, 430.0 | 800 | 0.0012 | 50 | 12. 422 | 1, 474. 9 | 44.9 | |
| 6 1, 430. | 0_1, 474. 9 | 7 1, 400.0 | 2, 200 | 0.0006 | 50 | 9.475 | 1, 465. 4 | 65.4 | |
| 7 1, 400. | 0 1, 465, 4 | 8 1, 420.0 | 1,000 | 0.0006 | 50 | 4. 307 | 1, 461. 1 | 41.1 | |
| 8 1, 420. | 0 1,461.1 | 9 1, 400.0 | 1,600 | 0.0003 | 50 | 1.912 | 1, 459. 2 | <u>59. 2</u> | |
| 9 1, 400. | 0 1,459.2 | 10 1,450.0 | 900 | 0.0002 | 30 | 3, 589 | 1,455.6 | 5.6 | |
| 8 1, 420. | 0 1, 461. 1 | 11 1, 420.0 | 300 | 0.0002 | 30 | 1.196 | 1, 459. 9 | 39.9 | |
| 10 1, 450. | 0 1, 455. 6 | 11 1, 420.0 | 1,500 | 0.0002 | 30 | 5.982 | 1,449.6 | 29, 6 | |
| 6 1, 430. | 0 1, 474. 9 | 12 1, 450.0 | 1, 400 | 0.0005 | 50 | 3. 541 | 1, 471. 3 | 21.3 | |
| | 0 1, 471. 3 | 13 1, 425. 0 | 1,500 | 0.0003 | 30 | 21.566 | 1, 449.8 | 24.8 | |
| | 0 1, 449.8 | 14 1,400.0 | 950 | 0.0002 | 30 | 3.789 | 1,446.0 | 46.0 | |
| | 0 1, 446.0 | 11 1, 420.0 | 1,500 | 0.0002 | 30_ | 5. 982 | 1, 440.0 | 20.0 | |
| | | | | | | | | 1 11 | |
| | | • | | | | | | | |

