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PUBLIC RECORD OFFICE

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TURBO-MULAMUTI EXTENSION.

USARA RAILWAY

232

MALABA RIVER - MULAMUTI SECTION.

Length of Line - ^{Main Span.} 115.25 Miles.

I. PRELIMINARY & DETAILED SURVEY.

| Description of Work | Unit | Rate | Malaba River - Mulamuti Section 115.25 Miles. | |
|----------------------|------|--------|--|---------|
| | | | Length | Cost. |
| (A). Survey Expenses | Mile | 300.00 | 115.25 | 34,575 |
| (B). Plant | " | 100.00 | 115.25 | 11,525 |
| (C). Establishment | " | 900.00 | 115.25 | 103,725 |
| Total | | | | 149,825 |
| Rate per Mile | | | | 1,300 |

MAN.

46

PUNJO-MBULAMUTI EXTENSION.

UGANDA RAILWAY.

233

MALABA RIVER - MBULAMUTI SECTION.

IX LAND.

Metro Gauge.
Length of Line - 118.25 Miles.

| Description of Work. | Unit | Rate | Malaba River - Mbulamuti 118.25 Miles | |
|----------------------|------|-------|--|------------------|
| | | | Area | Cost. |
| Cultivated | Acre | 20.00 | 1680 | 32,400.00 |
| Scrub Land. | " | 3.00 | 1280 | 6,600.00 |
| TOTAL. | | | | 39,000.00 |
| 5% Contingencies | | | | 1,950.00 |
| Grand Total. | | | | 40,950.00 |
| Rate per Mile. | | | | 356/- |

MAM.

TURBO - MBULANUTI EXTENSION.

UGANDA RAILWAY.

231

NALABA RIVER - MBULANUTI SECTION.

Metro Gauge.

Length of Line, 115.25 Miles.

III. Formation.

| Description of Work. | Unit. | Rate. SHE. | Nalaba River - Mbulanuti. 115.25 Miles. | | |
|-------------------------|----------------|---------------|--|------------------|-------|
| | | | Quantity units of 1000. | Cost. SHE. | |
| <u>Earthworks.</u> | | | | | |
| Soft Earth. | 1000 Cft. | 70/- | 4,400 | 308,000 | |
| Hard Pan. | " | 95/- | 4,444 | 422,180 | |
| Hard Rock. | " | 170/- | 1,000 | 170,000 | |
| Bank by excavation. | | | | | |
| Soft Earth. | 1000 Cft. | 50/- | 25,724 | 1,286,200 | |
| Hard Pan. | " | 75/- | 9,210 | 690,750 | |
| Cutting:- | | | | | |
| Soft Earth | " | 50/- | 5,933 | 296,650 | |
| Hard Pan and Soft Rock. | " | 75/- | 5,420 | 406,500 | |
| Hard Rock. | " | 150/- | 5,701 | 855,150 | |
| Clearing Scrub. | 1000 Srt. | 12/- | 60,528 | 726,336 | |
| Side Drains. | | | | | |
| Soft Earth. | 1000 Cft. | 50/- | 185 | 9,250 | |
| Hard Pan and Soft Rock. | " | 75/- | 13 | 975 | |
| Hard Rock. | " | 150/- | 174 | 26,100 | |
| Catch water Drains. | | | | | |
| Soft Earth. | " | 50/- | 3,429 | 171,450 | |
| Hard Pan. | " | 75/- | 1,112 | 83,400 | |
| Temporary Diversions | Service Roads. | Mile. | 300/- | 20 | 6,000 |
| Total. | | | | 5,458,941 | |
| 2% Contingencies. | | | | 272,947 | |
| GRAND TOTAL. | | | | 5,731,888 | |
| Rate per mile. | | | | 50,190 | |

*1% Subsidement work for Mpologoma Swamp Crossing.

TURBO-NEULAMUTI EXTENSION.

UGANDA RAILWAY.

MALABA RIVER - NEULAMUTI SECTION.

231

III. Formation.

Metro Gauge.

Length of Line, 115.25 Miles.

| Description of Work. | Unit. | Rate. SHE. | Malaba River - Neulamuti. 115.25 Miles. | |
|-------------------------|----------------|---------------|--|------------------|
| | | | Quantity units of 1000. | Cost. SHE |
| <u>Earthworks.</u> | | | | |
| Soft Earth. | 1000 Cft. | 70/- | 4,400 | 308,000 |
| 'X' Hard Pan. | " | 95/- | 4,444 | 422,180 |
| Hard Rock. | " | 170/- | 1,000 | 170,000 |
| Bank by excavation | | | | |
| Soft Earth. | 1000 Cft. | 50/- | 25,724 | 1,286,200 |
| Hard Pan. | " | 75/- | 9,210 | 690,750 |
| Cutting:- | | | | |
| Soft Earth | " | 50/- | 5,933 | 296,650 |
| Hard Pan and Soft Rock. | " | 75/- | 3,420 | 406,500 |
| Hard Rock. | " | 150/- | 5,701 | 855,150 |
| Clearing Scrub. | 1000 Srt. | 12/- | 60,528 | 726,336 |
| Side Drains. | | | | |
| Soft Earth. | 1000 Cft. | 50/- | 185 | 9,250 |
| Hard Pan and Soft Rock. | " | 75/- | 13 | 975 |
| Hard Rock. | " | 150/- | 174 | 26,100 |
| Catch water Drains. | | | | |
| Soft Earth. | " | 50/- | 3,429 | 171,450 |
| Hard Pan. | " | 75/- | 1,112 | 83,400 |
| Temporary Diversions | Service Roads. | Mile. | 300/- | 6,000 |
| Total. | | | | 5,458,941 |
| 2% Contingencies. | | | | 272,947 |
| GRAND TOTAL. | | | | 5,731,888 |
| Rate per mile. | | | | 49,190 |

'X' Reinforcement work for Nyagoga Sump Crossing.

TURBO-MBUKAMUTI EXTENSION

235

UGANDA RAILWAY.

MABARA RIVER - MBUKAMUTI SECTION.

Metre Gauge
Length of line = 115.25 Miles.

VI. BRIDGE WORK (Major Bridges 40' span & over).

| Description of Work. | Unit | Rate | Mabara River - Mbukamuti. 115.25 Miles. | |
|------------------------------|-------------|-------|--|-------------------|
| | | | 2 Spans 40 feet. 15 Spans 60 feet. | |
| | | | Quantity | Cost. |
| <u>Excavation</u> Soft Earth | 1000 cu.ft. | 50/- | 40,000 cu.ft. | 2,000 |
| Hard pan. | 1000 " | 75/- | 10,000 " " | 750 |
| Rock. | 1000 " | 150/- | 5,000 " " | 750 |
| Concrete | Cu.ft. | 3/- | 78,000 " " | 234,000 |
| Steel Work. | Tons. | 550/- | 363 Tons. | 210,650 |
| Bridge Sleepers | each | 17/- | 735 No. | 12,495 |
| Sleeper Bolts | " | 1/- | 2,940 " | 2,940 |
| Sleeper Plates | " | 1/- | 1,470 " | 1,470 |
| Goffer Dams. | ft. run. | 20/- | 1,680 Ft. | 33,600 |
| Plant | Sum. | | Sum. | 10,000 |
| Total | | | | 508,658 |
| ± Contingencies. | | | | 25,432 |
| Grand Total | | | | 534,090 |
| Rate per Mile. | | | | Rs. 4634/- |

M.M.

UGANDA RAILWAY.

MALABA RIVER - MBULAMUTI SECTION.

Metre Gauge.

Length of Line 115.25 Miles

VI. B. Bridge Work (Minor Bridges under 40' span)

| Description of Work. | Unit | Rate. | Malaba River-Mbulamuti, 115.25 Miles. | |
|-------------------------|---------------------|-------|--|------------------|
| | | | Quantity. | Cost. |
| | | | 139-2 foot Box Culverts. | |
| | | | 35-3 " " " | |
| | | | 10-4 " " " | |
| | | | 11-6 " Arches | |
| | | | 6-8 " " " | |
| | | | 4-12 " " " | |
| | | | 6-12 span Girders. | |
| | | | 4-20 " " " | |
| Excavation. Soft Earth. | 1000 Cft. | 50/- | 70,000 Cft. | 3,500 |
| Hard Pan and Soft Rock. | " | 75/- | 90,000 " | 6,750 |
| Hard Rock. | " | 150/- | 4,000 " | 600 |
| Concrete. | Cft. | 3/- | 321,000 | 963,000 |
| Steelwork. | Ton | 55/- | 15 Tons. | 825 |
| Bridge Sleepers | Each | 17/- | 60 No. | 1,020 |
| Sleeper Bolts. | " | 1/- | 240 " | 240 |
| " Plates. | " | 1/- | 120 " | 120 |
| Pitching. | 1000 Cft. | 100/- | 108,000 Cft. | 10,800 |
| | Total | | | 986,855 |
| | 5% Contingencies. | | | 49,343 |
| | GRAND TOTAL. | | | 1,036,198 |
| | Rate per mile. | | | 8,991 |

REAS - BHILAI RIVER
ROAD RAILWAY
MALWA RIVER - BHILAI SECTION.

237

Y. ENGINE. LEVEL CROSSING ETC.

Major Survey.
 Length of Line = 115.28 Miles

| Description of Work | Unit | Rate | Malwa River - Bhilai Section. 115.28 Miles | |
|---|-------------|-------|---|--------|
| | | | Quantity | Cost. |
| Notice Boards | Set | 55/- | 60 No. | 3,300 |
| Level Crossings (In- cluding sleepers, Rails & erection charges). | Each | 200/- | 30 No. | 6,000 |
| Fencing. | per mile | 50/- | 115.28 Miles | 5,765 |
| Gradient Posts | do | 50/- | do | 5,765 |
| Mile Posts | do | 25/- | do | 2,882 |
| Boundary Posts | do | 20/- | do | 2,455 |
| Total | | | | 27,767 |
| 5% Contingencies | | | | 1,388 |
| Grand Total | | | | 29,155 |
| Rate per Mile. | | | Shs. | 255/- |

MAN.

RURRO - MBULAMUTI EXTENSION.

UGANDA RAILWAY.

MALABA RIVER - MBULAMUTI SECTION.

V. TELEGRAPH.

Metre Gauge
Length of Line - 115.25 Miles

| Description of Work. | Unit | Rate | MALABA RIVER - MBULAMUTI. 115.25 Miles. | |
|---|-------------|--------|--|-------------|
| | | | Quantity | Cost. |
| Air Line 3 wires, steel Poles 18 per mile, Insulators, erection etc., etc. | per mile | 3800/- | 115.25 | 437,950 |
| Instruments Tiers | sets | 8400/- | 9 | 75,600 |
| Instruments telephones | each | 300/- | 14 | 4,200 |
| Total | | | | 517,750 |
| 5% Contingencies | | | | 25,888 |
| Grand Total | | | | 543,638 |
| Rate per Mile. | | | | Shs. 4717/- |

UGANDA RAILWAY.

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UGANDA RAILWAY.

MALABA RIVER - MBULAMUTI SECTION.

VII. PERMANENT WAY & BALLAST.

Metre Gauge.
Length of Line = 115.25 Miles.

| Description of Work | Malaba River - Mbulamuti. 115.25 Miles | | | |
|---|---|---------|----------|--------------------|
| | Unit | Rate | Quantity | Cost. |
| Main Line 50 lbs. Rails with Steel Sleepers and all fittings. | per mile | 50600/- | 115.75 | 6,022,500 |
| Linking and laying including train charges, lifting, packing and boxing | per mile | 1500/- | 115.75 | 175,125 |
| Ballast (40,000 cu.ft per mile). Including breaking and distributing. | 1,000 cu.ft | 800/- | 115.75 | 23,750 |
| Points and Crossings. | | | | |
| Including sleepers (1 - 12) | each | 770/- | 12 | 13,840 |
| Roding Tumblers etc. (1 - 8) | " | 730/- | 36 | 26,280 |
| Total | | | | 6,274,515 |
| 5% Contingencies | | | | 313,726 |
| Total Cost. | | | | 6,588,241 |
| Rate per mile | | | | Shs. 57,165 |

TURBO-MBULAMUTI EXTENSION.

UGANDA RAILWAY.

MALABA RIVER - MBULAMUTI SECTION.

240

VIII.A. STATION & BUILDINGS.

Metre Gauge
Length of Line - 115.25 Miles.

BUILDINGS & FIXTURES.

| Description of Work. | Unit | Rate | Malaba River - Mbulamuti 115.25 Miles. | |
|--|--------------|----------|---|---------|
| | | | Quantity | Cost. |
| 10 Unit Maintenance pandies | each | 12,000/- | 29 | 348,000 |
| 2nd. Class Station, Complete in Brick and tiled Roof. | " | 13,000/- | 1 | 13,000 |
| 3rd. Class Station, Complete in Brick and tiled Roof. | " | 7,500/- | 7 | 52,500 |
| Good Shed 60' x 25' | " | 11,800/- | 1 | 11,800 |
| Good Shed 40' x 20' | " | 6,250/- | 7 | 43,750 |
| European Latrine 1 Unit | " | 500/- | 9 | 4,500 |
| Native Latrine 4 Unit | " | 1,600/- | 8 | 12,800 |
| Station Name Boards. | " | 140/- | 8 | 1,120 |
| Platform Lamps. | " | 150/- | 16 | 2,400 |
| Drinking Hydrants. | " | 250/- | 16 | 4,000 |
| Station Platform | 1,000 cu.ft. | 40/- | 108,000 cu.ft. | 4,320 |
| Approach Roads | mile | 8,000/- | 10 miles | 80,000 |
| Water Service Pipes | per lin.ft. | 1/- | 12,800 feet | 12,800 |
| Bungalows "B" Type | each | 22000/- | 10 | 220,000 |
| " " "C" " | " | 19000/- | 18 | 342,000 |
| " " "D" " | " | 15000/- | 3 | 45,000 |
| " " "E" " | " | 3,200/- | 24 | 76,800 |
| " " "G" " | " | 2,600/- | 46 | 119,600 |
| Asiatic S.M. & A.S.M. 2 Unit Bungalow. | " | 18000/- | 7 | 126,000 |

| | | | | |
|--|---|---------|----|----------------------|
| " " " | " | 3,200/- | 24 | 76,800 |
| " " " | " | 2,400/- | 46 | 119,600 |
| Asstic S.M. & A.S.M. 2 Unit Bungalow. | " | 1,800/- | 7 | 126,000 |
| Native Landies 7 Unit. | " | 8,200/- | 13 | 107,900 |
| " " 4 Unit | " | 4,200/- | 4 | 16,800 |
| Native Latrines. 7 Unit | " | 2,800/- | 2 | 5,600 |
| A.P.W.I. Bungalow | " | 9,000/- | 3 | 27,000 |
| Railway Institute | " | 20000/- | 2 | 40,000 |
| Engine Sheds | " | 50000/- | 2 | 100,000 |
| Temporary Accommodation | | | | |
| Engineers. | " | 1,400/- | 45 | 63,000 |
| Stores. | " | 1,400/- | 30 | 42,000 |
| Locomotive | " | 1,000/- | 8 | 8,000 |
| Medical | " | 1,200/- | 20 | 24,000 |
| Total. | | | | 1,957,600 |
| 5% Contingencies | | | | 97,884 |
| Grand Total | | | | 2,055,574 |
| Rate per mile | | | | Shs. 17,826/- |

I.A.M.

TURBO-MBULAMUTI EXTENSION.UGANDA RAILWAY.

241

MALABA RIVER - MBULAMUTI SECTION.

Metre Gauge.

Length of Line 115.25 Miles.

VIII. B. Station Buildings.

Station Machinery.

| Description of Works. | Malaba River - Mbulamuti. 115.25 Miles. | | | |
|-------------------------|--|----------|-----------|---------|
| | Unit | Rate. | Quantity. | Cost. |
| Ashpits | Unit | 2,500/- | 4 | 10,000 |
| Fuel Stages. | Each | 1,600/- | 6 | 9,600 |
| Water Tanks. | " | 8,900/- | 16 | 142,400 |
| Water Cranes. | " | 2,300/- | 16 | 36,800 |
| Pipe lines 4" | Miles. | 13,200/- | 7.5 | 99,000 |
| " " " 2" | Feet. | 2/50 | 2000 ft. | 5,000 |
| Pumps (steam) | Unit | 10,000/- | 6 | 60,000 |
| Signals (1 station) | " | 5,000/- | 9 | 45,000 |
| Cranes. | Each | 14,000/- | 9 | 126,000 |
| 'X' Buffer Stops. | " | 1,000/- | 9 | 9,000 |
| Cattle Pens. | " | 1,000/- | 1 | 1,000 |
| Weighing Machines. | " | 8,800/- | 8 | 70,400 |
| Scotch Blocks. | " | 50/- | 15 | 750 |
| Air Valves. | " | 90/- | 18 | 1,620 |
| Total. | | | | 616,570 |
| 5% Contingencies. | | | | 30,828 |
| GRAND TOTAL. | | | | 647,398 |
| Rate per mile. | | | Shs | 5,617 |

'X' Buffer Stops & vehicle ramp combined.

END.

TURBO - MBULAMUTI EXTENSION.

UGANDA RAILWAY.

MALABA RIVER - MBULAMUTI SECTION.

242

Metre Gauge
Length of Line = 115.25 Miles.

VIII.C. STATION & BUILDINGS

| Description of Work. | | | Malaba River - Mbulamuti. 115.25 Miles. | |
|----------------------------------|--------|----------|--|-------------------|
| | Unit | Rate | Quantity | Cost. |
| Equipment of 2nd. Class Station. | 1 Stn. | 10,000/- | 2 | 20,000 |
| Equipment of 3rd. Class Station. | do | 8,100/- | 7 | 56,700 |
| I Furnishing of Bungalows | | | | |
| Engineers | each | 700/- | 15 | 10,500 |
| Stores | " | 500/- | 10 | 5,000 |
| Medical | " | 700/- | 4 | 2,800 |
| Locomotive | " | 500/- | 3 | 1,500 |
| Accounts | " | 500/- | 4 | 2,000 |
| Total | | | | 99,500 |
| 8% Contingencies | | | | 4,975 |
| Grand Total | | | | 104,475 |
| Rate per Mile | | | | Shs. 907/- |

MAM.

I Furniture to be used latterly for equipment of Station Staff Bungalows.

U G A N P A R A I L W A Y .

MALABA RIVER - MUDLANUTI SECTION.

Metre Gauge.

Length of Line 115.25 Miles.

IX, Plant.

| Description of Work. | Unit | Rate. | Quantity. | Malaba River-Mudlanuti. 115.25 Miles. | Cost. |
|---|-------|---------|-----------|--|---------|
| Equipment of 1 maintenance gang | Each. | 340/- | 29 | | 9,860 |
| SMT's Tools. | " | 500/- | 1 | | 500 |
| Trellises. | " | 1,200/- | 12 | | 14,400 |
| SMT's Tools. | " | 200/- | 3 | | 600 |
| <u>Construction.</u> | | | | | |
| Flintlocking Tools. | Mile. | 200/- | 115.25 | | 23,050 |
| General. | | | | | |
| Locomotive, Carriage & Wagon, Workshops, | | | | | |
| Total. | | | | | 94,510 |
| % Contingencies. | | | | | 4,735. |
| <u>GRAND TOTAL.</u> | | | | | 99,235 |
| Rate per mile. | | | | | Rs 861. |

NO. 243

TURBO-MBULAMUTI RAILWAY SECTION.

UGANDA RAILWAY

MBARA RIVER - MBULAMUTI SECTION.

X. GENERAL CHARGES.

Metre Gauge
Length of Line - 115.25 M.

| Description. | Period Years | Unit | Rate Shs. | Cost Shs. |
|----------------------------------|-----------------|----------|--------------|--------------|
| A. DIRECTION | | | | |
| Crown Agents | 2 | per mile | 200 | 22,050 |
| Consulting Engineers | 2 | year | 10,000 | 10,000 |
| General Manager's Office | 2 | " | 15,000 | 30,000 |
| Chief Engineer's Office | 2 | " | 20,000 | 40,000 |
| Chief Accountant's Office | 2 | " | 10,000 | 20,000 |
| Chief Storekeepers Office | 2 | " | 10,000 | 20,000 |
| B. ENGINEERING. | | | | |
| A Resident Engineer (1) | 2 | year | 14,000 | 28,000 |
| B Deputy Resident Engineer (1) | 2 | " | 12,000 | 24,000 |
| Assistant Engineers (12) | 2 | " | 18,000 | 36,000 |
| Junior Engineers (12) | 2 | " | 10,000 | 240,000 |
| Inspector of Works (12) | 2 | " | 8,000 | 192,000 |
| P.W. Inspector (2) | 1.5 | " | 8,000 | 24,000 |
| E Head Clerk (1) | 2 | " | 8,000 | 16,000 |
| Clarks (14) | 2 | " | 7,000 | 196,000 |
| Costs Draughtsman (1) | 2 | " | 8,000 | 16,000 |
| Draughtsman (2) | 1.5 | " | 7,000 | 21,000 |
| Tracers (2) | 1.5 | " | 6,000 | 18,000 |
| Miscellaneous Labour (200) | 2 | " | 240 | 96,000 |
| Instruments | | Sum | 60,000 | 60,000 |
| Office Expenses (Stationary etc) | | " | 61,000 | 61,000 |
| Fares for above Staff | | " | 3,000 | 3,000 |
| Accommodation | | " | 156,000 | 156,000 |
| Travelling & Car Allowance | | " | 60,000 | 60,000 |
| C. ACCOUNTS | | | | |
| Accountant (1) | 2 | year | 14,000 | 28,000 |
| Asst. Accountant (2) | 2 | " | 12,000 | 48,000 |
| Paymaster (1) | 2 | " | 10,000 | 20,000 |
| Cashier (1) | 2 | " | 10,000 | 20,000 |
| Asiatic Clerks (6) | 2 | " | 6,000 | 72,000 |
| Messengers (6) | 2 | " | 240 | 2,880 |
| Office Expenses (Stationary etc) | | Sum | 30,000 | 30,000 |
| Fares for above Staff | | " | 3,000 | 3,000 |
| Accommodation | | " | 16,000 | 16,000 |
| Travelling & Car Allowance | | " | 16,000 | 16,000 |
| D. STORES. | | | | |
| Storekeeper (1) | 2 | year | 12,000 | 24,000 |
| Asst. Storekeeper (2) | 2 | " | 10,000 | 40,000 |
| Clerks (2) | 2 | " | 8,000 | 32,000 |
| Yardmen (2) | 2 | " | 7,000 | 28,000 |
| Miscellaneous Labour (200) | 2 | " | 240 | 96,000 |
| Office Expenses | | Sum | 30,000 | 30,000 |
| Fares for above staff | | " | 3,000 | 3,000 |
| Accommodation. | | " | 60,000 | 60,000 |
| E. MEDICAL. | | | | |
| Doctor (2) | 2 | year | 16,000 | 64,000 |
| Sub. Asst. Surgeons (3) | 2 | " | 5,200 | 31,200 |
| Dispenser (2) | 2 | " | 5,200 | 20,800 |
| Dressers (12) | 2 | " | 450 | 5,400 |
| Sweepers (8) | 2 | " | 240 | 3,840 |
| Miscellaneous Labour (20) | 2 | " | 240 | 9,600 |
| Office Expenses | | Sum | 3,000 | 3,000 |
| Medicines | | " | 3,000 | 3,000 |
| Fares for above Staff. | | " | 3,000 | 3,000 |
| Accommodation | | " | 30,000 | 30,000 |
| Travelling & Car Allowance | | " | 16,000 | 16,000 |
| F. ADMINISTRATION. | | | | |
| Senior A.S.C. (1) | 2 | year | 18,000 | 36,000 |

TURBO-MBULAMUTI EXTENSION.

UGANDA RAILWAY

NABIRA RIVER - MBULAMUTI SECTION.

Metre Gauge
Length of Line - 115.25 Miles.

| Period Years | Unit | Rate Shs. | Cost Shs. |
|-----------------|----------|--------------|--------------|
| 2 | per mile | 200 | 23,050 |
| 2 | year | 10,000 | 10,000 |
| 2 | " | 15,000 | 30,000 |
| 2 | " | 20,000 | 40,000 |
| 2 | " | 10,000 | 20,000 |
| 2 | " | 10,000 | 20,000 |
| (1) | year | 14,000 | 28,000 |
| 2 | " | 12,000 | 24,000 |
| 2 | " | 16,000 | 32,000 |
| 2 | " | 10,000 | 20,000 |
| 2 | " | 8,000 | 16,000 |
| 1.5 | " | 8,000 | 12,000 |
| 2 | " | 8,000 | 16,000 |
| 2 | " | 7,000 | 14,000 |
| 2 | " | 8,000 | 16,000 |
| 1.5 | " | 7,000 | 10,500 |
| 1.5 | " | 6,000 | 9,000 |
| (200) | " | 240 | 48,000 |
| | Sum | 60,000 | 60,000 |
| | " | 61,000 | 61,000 |
| | " | 9,000 | 9,000 |
| | " | 156,000 | 156,000 |
| | " | 60,000 | 60,000 |
| 2 | year | 14,000 | 28,000 |
| 2 | " | 12,000 | 24,000 |
| 2 | " | 10,000 | 20,000 |
| 2 | " | 10,000 | 20,000 |
| 2 | " | 6,000 | 12,000 |
| 2 | " | 240 | 480 |
| | Sum | 60,000 | 60,000 |
| | " | 3,000 | 3,000 |
| | " | 18,000 | 18,000 |
| | " | 16,000 | 16,000 |
| 2 | year | 12,000 | 24,000 |
| 2 | " | 10,000 | 20,000 |
| 2 | " | 8,000 | 16,000 |
| 2 | " | 7,000 | 14,000 |
| 2 | " | 240 | 480 |
| | Sum | 30,000 | 30,000 |
| | " | 3,000 | 3,000 |
| | " | 60,000 | 60,000 |
| 2 | year | 16,000 | 32,000 |
| 2 | " | 5,200 | 10,400 |
| 2 | " | 5,200 | 10,400 |
| 2 | " | 450 | 900 |
| 2 | " | 240 | 480 |
| 2 | " | 240 | 480 |
| | Sum | 3,000 | 3,000 |
| | " | 3,000 | 3,000 |
| | " | 3,000 | 3,000 |
| | " | 30,000 | 30,000 |
| | " | 16,000 | 16,000 |
| 2 | year | 12,000 | 24,000 |
| 2 | " | 10,000 | 20,000 |

| | | | | |
|----------------------------|--|-----|--------|--------|
| Miscellaneous Labour (20) | | | 200 | 2,000 |
| Office Expenses | | | 240 | 2,000 |
| Medicine | | SUM | 2,000 | 2,000 |
| Fares for above Staff. | | " | 2,000 | 2,000 |
| Accommodation | | " | 20,000 | 20,000 |
| Travelling & Car Allowance | | " | 14,000 | 14,000 |

F. ADMINISTRATION.

| | | | | | |
|-------------------|------|---|------|--------|--------|
| Senior A.D.S. | (1) | 2 | year | 12,000 | 24,000 |
| Junior A.D.S. | (1) | 2 | " | 18,000 | 20,000 |
| Supt. of Police | (1) | 2 | " | 10,000 | 20,000 |
| Sub. Insp. Police | (8) | 2 | " | 2,400 | 14,400 |
| Police Constables | (30) | 2 | " | 480 | 28,800 |
| Clerks | (4) | 2 | " | 4,800 | 28,400 |
| Messengers | (4) | 2 | " | 240 | 1,720 |
| Office Expenses | | | SUM | 1,000 | 1,000 |
| Fares for above | | | " | 2,000 | 2,000 |
| Accommodation | | | " | 20,000 | 20,000 |
| Travelling | | | " | 16,200 | 16,200 |

G. LODG & TRAFFIC.

| | | | | | |
|---------------------------|-----|---|------|--------|--------|
| Lead Foreman | (1) | 2 | year | 8,000 | 14,000 |
| Drivers | (3) | 2 | " | 7,000 | 42,000 |
| Fitters | (2) | 2 | " | 7,000 | 28,000 |
| Guards | (3) | 2 | " | 7,000 | 42,000 |
| Fireman | (6) | 2 | " | 480 | 2,760 |
| Miscellaneous Labour (12) | | 2 | " | 240 | 2,760 |
| Office Expenses | | | SUM | 700 | 700 |
| Fares for above | | | " | 3,000 | 3,000 |
| Accommodation | | | " | 15,000 | 15,000 |

Total 2,226,710

5% Contingencies 142,325

Grand Total 2,369,035

Rate per Mile Sha. 26,084

25

2 Half salaries only shown as these officers will also be engaged on the Kenya Colony Section of the Extension, therefore their salary should be borne in the proportion of 50% Uganda and 50% Kenya.

TURBO - KILIMATI RAILWAY.DETAILED ESTIMATE.COMBINED ESTIMATE.

Combined estimate of Kenya Colony and Uganda Protectorate for the extension of the Uganda Railway from Turbo to Mbaraki, the estimated capital expenditure, exclusive of 20 per cent, will be £2,70,000 or £5,111 per mile.

TURBO-MALABA RIVER RAILROAD

UGANDA RAILWAY

245

Metre Gauge.

Length of Line 194 Miles.

Combined Estimates of Kenya Colony & Uganda Railway Projects in Sections.

| Description of Work. | Turbo-Malaba River. 78.75 Miles. | | Malaba River Mbulamuti. 115.25 Miles. | | Turbo-Mbulamuti. 194 Miles. | |
|--------------------------|-------------------------------------|------------|--|------------|--------------------------------|------------|
| | Cost. SHE. | Rate/Mile. | Cost. SHE. | Rate/Mile. | Cost. SHE. | Rate/Mile. |
| Survey. | 102,375 | 1,300 | 149,825 | 1,300 | 252,200 | 1,300 |
| Land. | 49,262 | 626 | 40,950 | 356 | 90,212 | 465 |
| Formation. | 1,524,789 | 19,363 | 5,711,888 | 50,190 | 7,256,677 | 37,406 |
| Bridge Work Major. | 453,895 | 5,760 | 534,088 | 4,634 | 987,683 | 5,091 |
| " Minor. | 694,433 | 8,819 | 1,036,198 | 8,991 | 1,730,631 | 8,921 |
| Fencing. | 16,999 | 211 | 29,152 | 253 | 45,711 | 236 |
| Telegraph. | 374,378 | 4,754 | 543,638 | 4,717 | 918,016 | 4,732 |
| Ballast & Permanent Way. | 4,815,374 | 61,140 | 6,938,241 | 57,165 | 11,403,615 | 58,782 |
| Station & Buildings. | | | | | | |
| Building & Fixtures. | 1,407,164 | 10,335 | 2,055,574 | 17,836 | 2,662,758 | 13,725 |
| Station Machinery. | 426,355 | 5,482 | 647,398 | 5,617 | 1,072,753 | 5,530 |
| Furniture. | 74,235 | 943 | 104,475 | 907 | 178,710 | 921 |
| Plant. | 64,208 | 815 | 99,235 | 861 | 163,443 | 842 |
| General Charges. | 1,708,678 | 21,698 | 2,999,545 | 26,026 | 4,708,223 | 24,269 |
| Total Cost. | 13,910,225 | | 20,550,207 | | 31,470,412 | |
| Rate per mile. | | 138,669 | | 178,396 | | 162,218 |

Rate per mile in sterling = 68,111

Cost of Construction and

Equipment of Line exclusive

of Rolling Stock. = 21,573,521

NOV.

INDEX AND PLAN
MAPS.

50.

245A

NOTE:-

Owing to the topography of the Survey Maps being only sketched, difficulties were experienced in fitting the Index Plan to the Survey Maps; consequently an Index Plan and Index Map are incorporated in this report.

—————
0
0

MBULAMUTI ST

Komulu
BUTARALA ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

MBULAMUTI ST

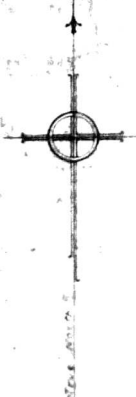
Total length of line (Turbo-Mbulamuti) - 154 Miles

UGANDA A

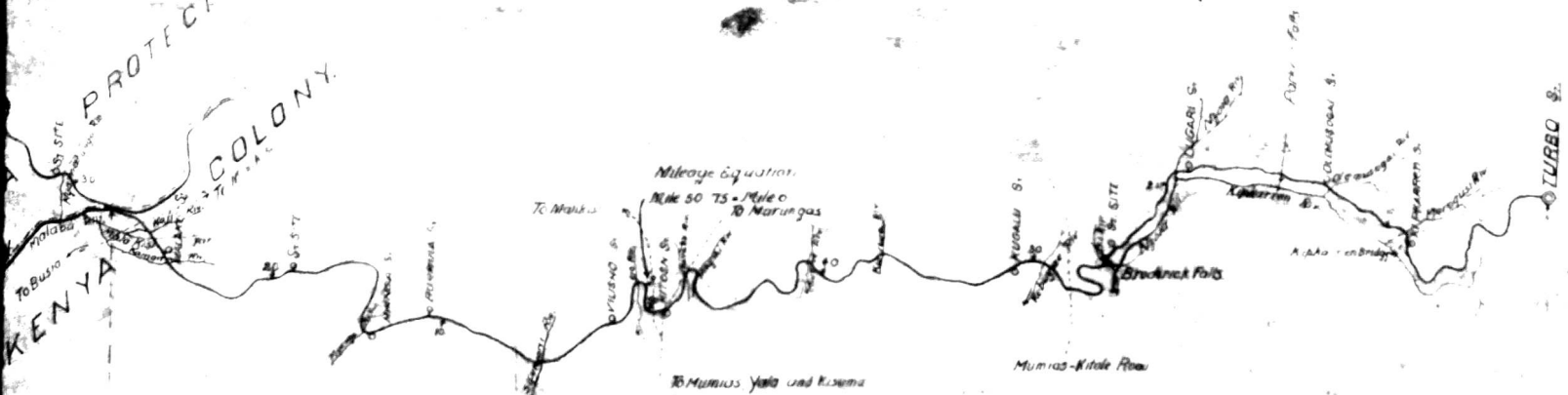
Length of

Uganda Railway
Turbo Mbulamuti Railway Survey
Index Plan

Scale
1 250,000 or 1 inch = 3.95 miles.



PROTECTORATE
COLONY.
KENYA



KENYA COLONY.
Length of Line in Kenya = 78.75 Miles

Chief Engineer
Uganda Railway
Nairobi.

John L. Dwyer
Resident Engineer
Turbo-Mbulamuti Railway
Survey.

Uganda Railway
Kiribo Mbulamuti Railway Survey

Index Section

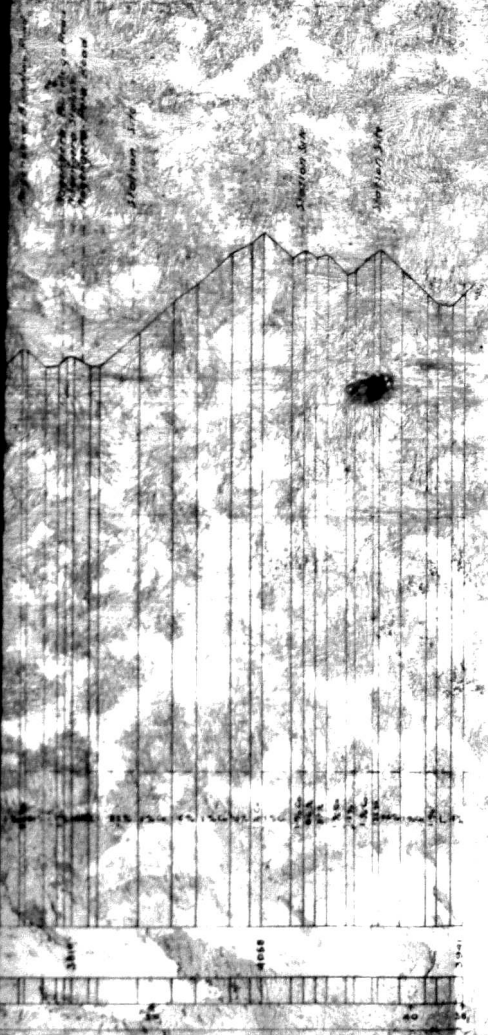
Scale

Horizontal 1 Inch = 3.97 Miles

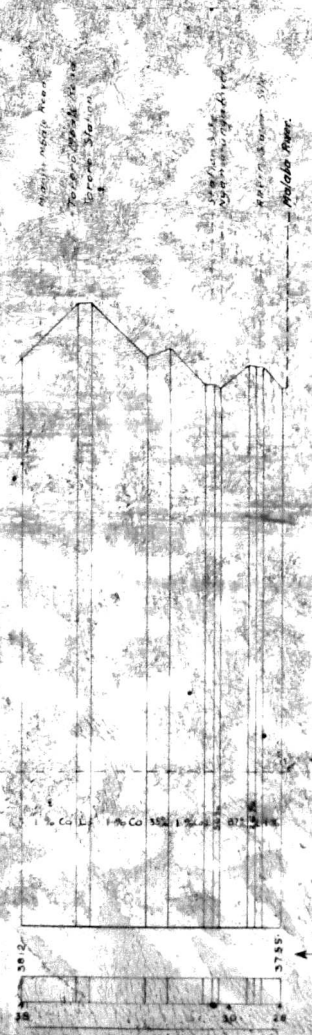
Vertical 1 Inch = 200 Feet

Mbulamuti Station

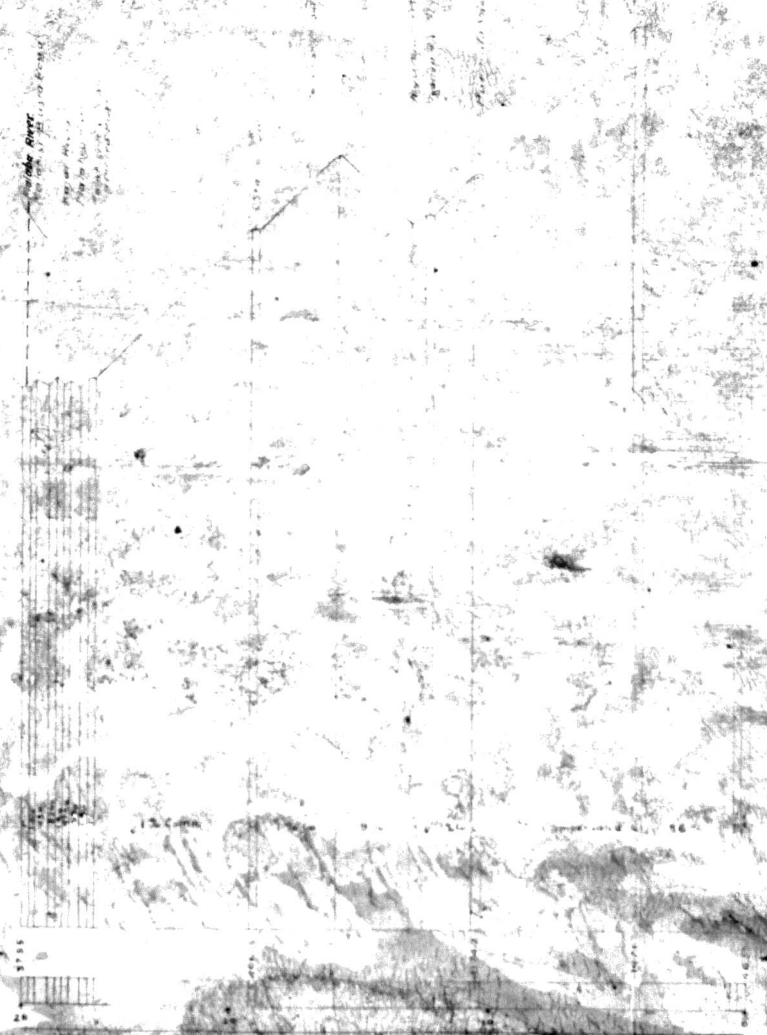




Level Equation $Level = 3771.1 + 0.0001 \times Station$ *1914-15 Survey*
Level = 3771.1 + 0.0001 \times Station *1914-15 Survey*



KENYA-UGANDA BOUNDARY



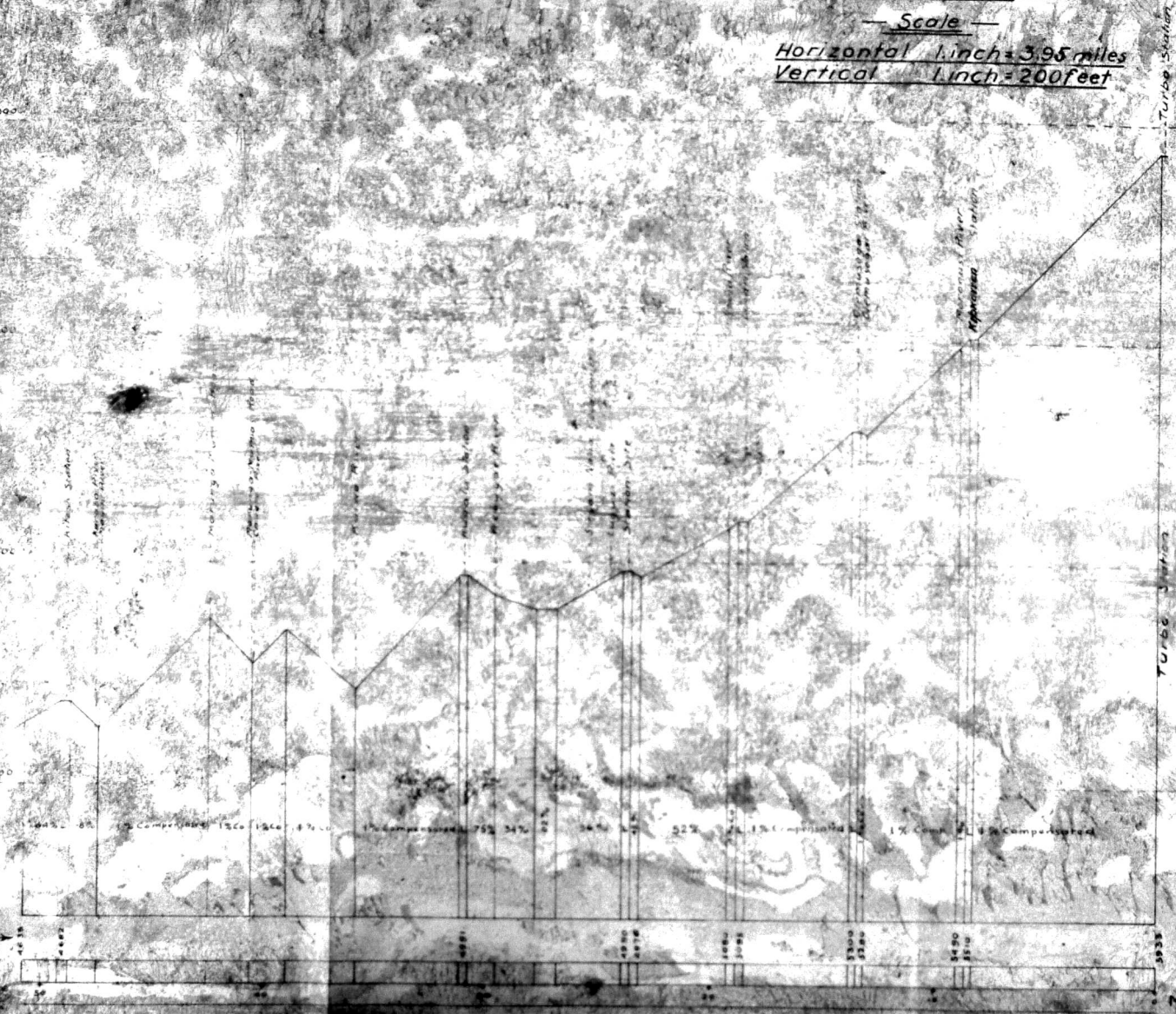
Change Equation $Change = 3715.0 + 0.0001 \times Station$ *1914-15 Survey*
Change = 3715.0 + 0.0001 \times Station *1914-15 Survey*

Uganda Railway
Turbo Mbulamuti Railway Survey

Index Section

— Scale —
 Horizontal 1 inch = 3.95 miles
 Vertical 1 inch = 200 feet

Chainage Equation — Mile 50.7 Turbo — 510 Paces
 — Mile 0 (Sta River — Mbulamuti Station)



John D. ...
 Resident Engineer
 Turbo-Mbulamuti Railway
 Survey

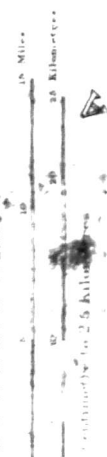
EAST AFRICA PROTECTOR

AFRICA 1:250,000

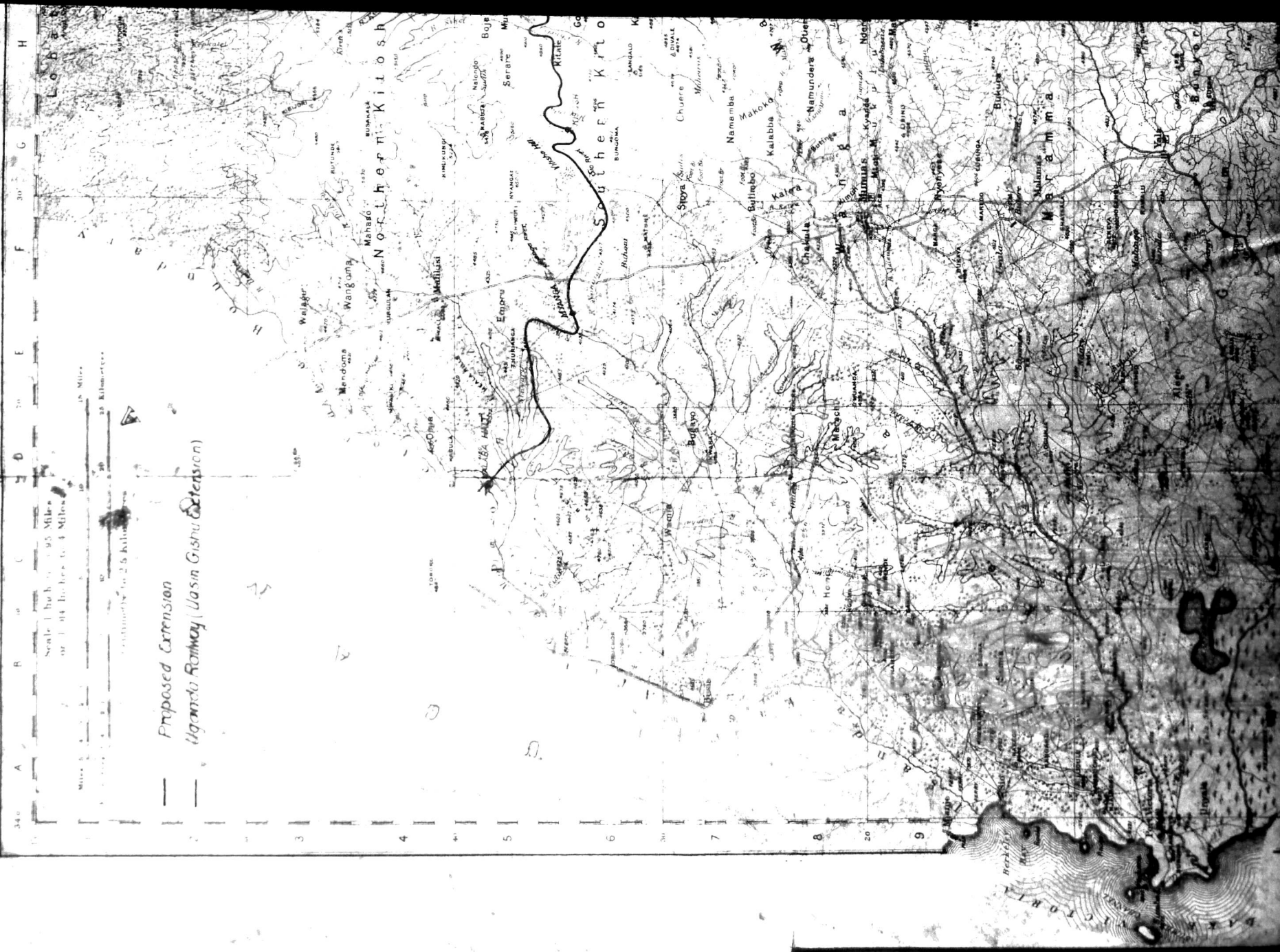
MUMIA'S

A B C D E F G H
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Scale 1 Inch = 3.95 Miles
or 1.04 Inches = 4 Miles



Proposed Extension
Uganda Railway (Uasin Gishu Extension)

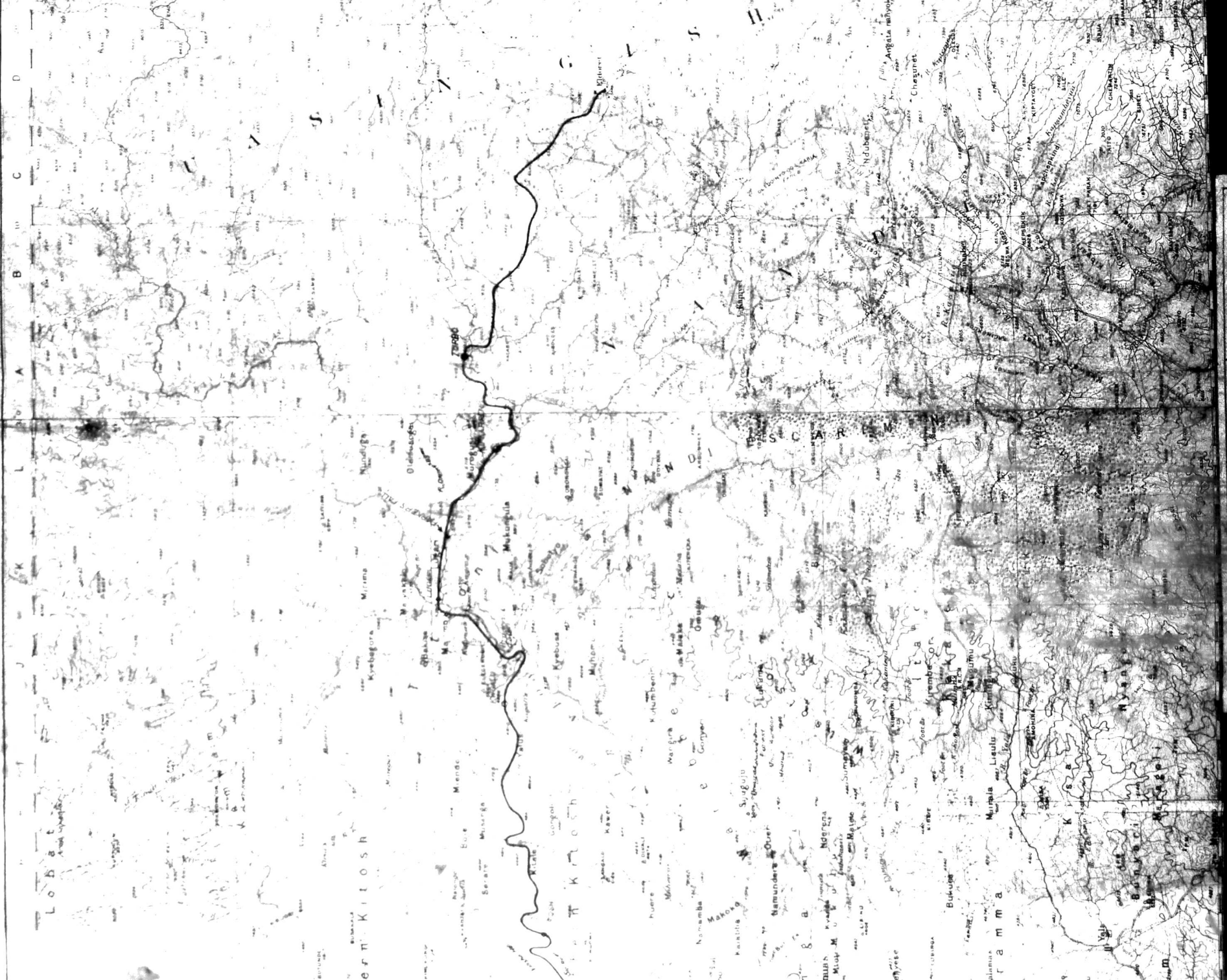


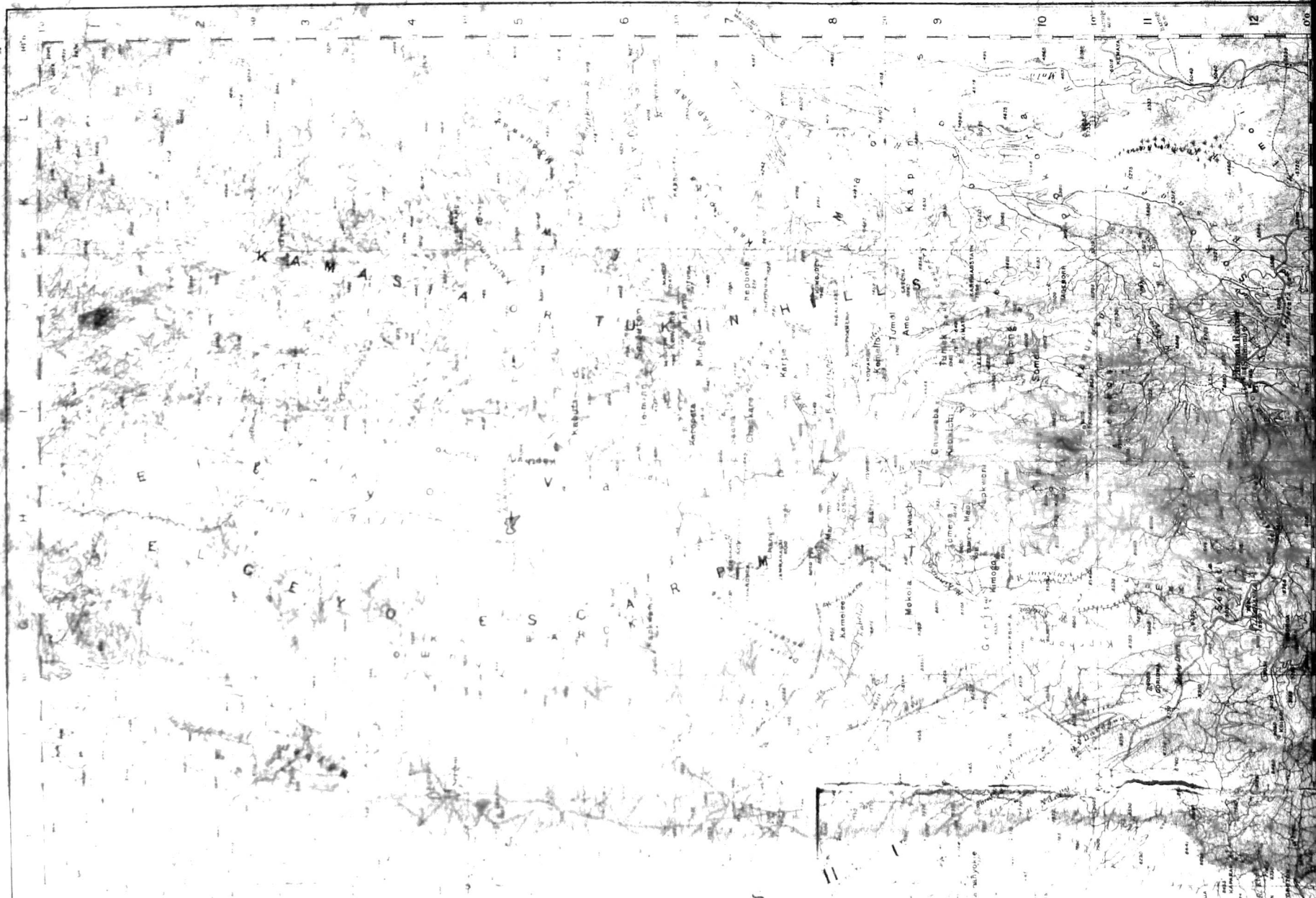
Turbo-Mbulamuli Extension
Uganda Railway
Kenya Section

PROJECTORATE

EAST

SHEET NORTH AFRICA 1:250,000





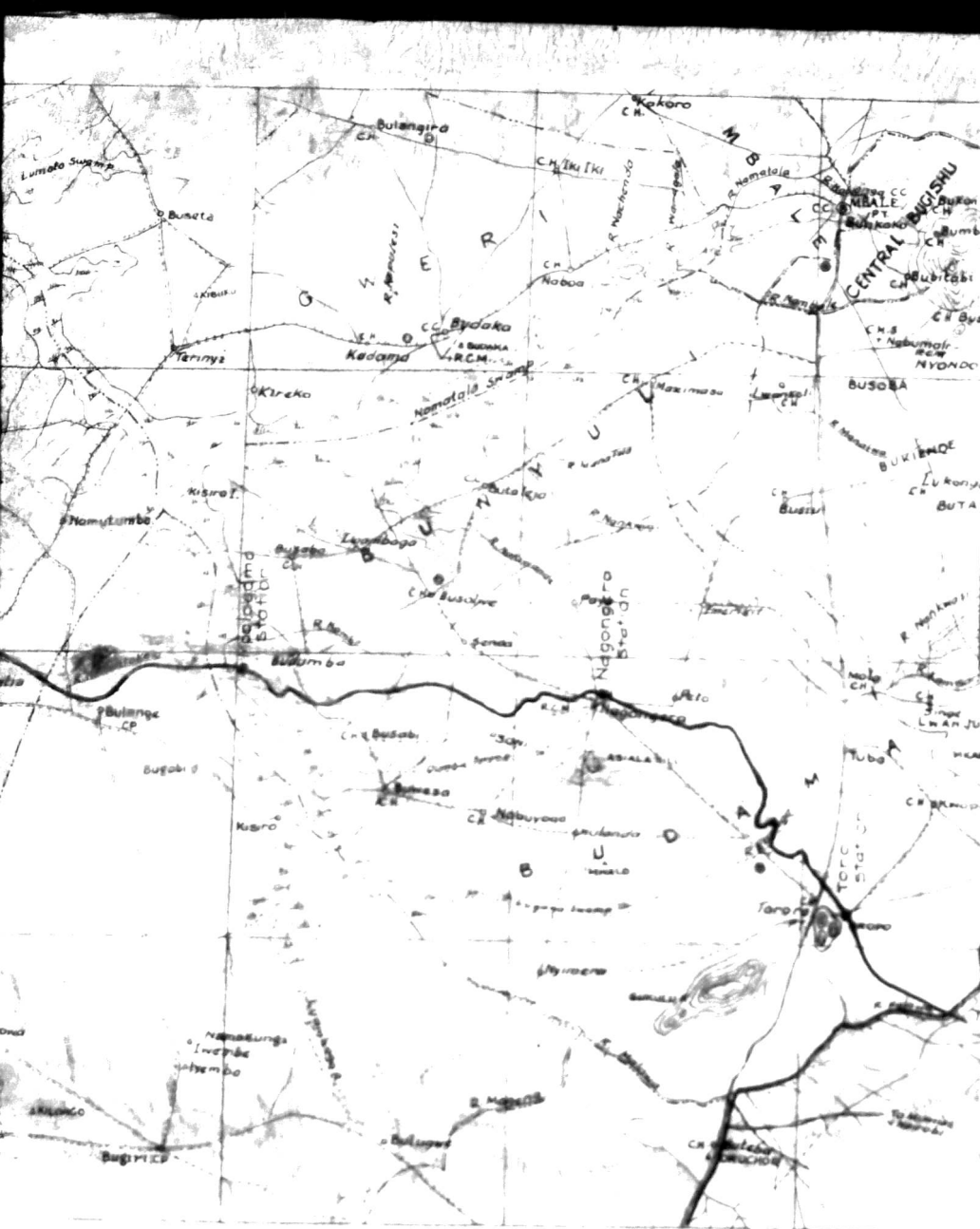
Chief Engineer
Uganda Railway

John S. Smith
Resident Engineer
Turbo-Mountain
Rly. Survey

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C.O. 533 313

PUBLIC RECORD FILE



— INDEX MAP —
SHEWING PROPOSED ROUTE
 — OF THE —
TURBO-MBULAMUTI EXTENSION
 — UGANDA RAILWAY —
MALABA RIVER-MBULAMUTI SECTION
 — UGANDA —

SCALE 1" = 3.95 MILES
 OR 1:014 ≈ 4 MILES
 R.F. 1:250,000

— UGANDA PROTECTORATE-KENYA COLONY —
 — BOUNDARY —

KENYA COLONY