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OF PAPUA NEW GUINEA

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STATION: Menyamyra

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1971 - 1972

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Papua New Guinea Patrol Reports

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[Volume 16]

NATIONAL ARCHIVES OF P.N.G. - WISANI.

PATROL REPORT OF: MENYAMYA MOROBE

ACC. No: 496.

Volume No: 19 [16] 19/11/72 Number of Reports: 5

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[1] 10 OF 1971/72	1-10	M.L. MACKELLAR D.O	KAPAIT TO MENYAMYA VIA MUMENG.	MAP PHOTOS	4.8.71 - 14.8.71	
[2] 20 OF 1971/72	1-8	L. SAYER APO	WAPI CENSUS DIVISION	MAP	8.11.71 - 10.12.71	
[3] 3 OF 1971/72	1-10	M. MACKELLAR ADC	WAPI CENSUS DIVISION.	PHOTO	N.A.	
[4] 4 OF 1971/72	1-5	I.V. KNOX APO	WEST & SOUTH WEST CENSUS DIVISION		N.A.	
[5] 5 OF 1971/72	1-4	L.B. SAYER	NORTHERN CENSUS DIVISION		N.A.	
[6] 6 OF 1971/72	1-2	I.V. KNOX	REPORT AT DISTRICT HQ		N.A.	
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[8] 2 OF 1971/72	1-10	R.P. MORRISON P.O	KAREGBA/ INDIWI CENSUS DIVISION.		20.9.71 - 5.10.71	
[9] 3 OF 1971/72	1-23	I.D. CAMERON APO	LANGIMAR CENSUS DIVISION	MAP	8.11.71 - 12.11.71	
[10] 4 OF 1971/72	1-9	R.P. MORRISON P.O	ASEKI-SCATE CREEK ROAD ROUTE	MAP	15.11.71 - 18.11.71	
[11] 5 OF 1971/72	1-5	I.D. CAMERON APO	KAPU-KABU CENSUS DIVISION		6.12.71 - 1.2.72	
[12] 6 OF 1971/72	1-7	R.P. MORRISON P.O	HAMBELI & NANIMA CENSUS DIV	MAP	13.12.71 - 16.12.71	
[13] 7 OF 1971/72	1-5	R.P. MORRISON P.O	POIYU ROAD OF KABU/NANIMA C.D		9.3.72 - 17.5.72	
[14] 8 OF 1971/72	1-6	I.D. CAMERON	PART KAPAU-KABU CENSUS DIV	MAP	27.3.72 - 30.3.72	
[15] 9 OF 1971/72	1-5	R.P. MORRISON P.O	REPORT AT DISTRICT HQ		N.A.	

MOROBE DISTRICT

PATROL REPORTS

1971 - 1972

MENYAMYA

<u>Report No.</u>	<u>Officer Conducting Patrol</u>	<u>Area Patrolled</u>
1-71-72	M.L. MACKELLAR	Kaiapit to Menyama via Mumeng, Slate Creek & Aseki.
2-71-72	L. SAYER	Wapi C.D.
3-71-72	H. MACKELLAR	Wapi C.D.
4-71-72	I.V. KNOX	West & South West C.D. Report at District H.Q.
5-71-72	L.D. SAYER	Northern C.D. Report at District H.Q.
6-71-72	I.V. KNOX	Report at District H.Q.

ASEKI

1-71-72	R.P. MORRISON	Lower Kapau/Nanima & Kapau-Kabu C.D.
2-71-72	R.P. MORRISON	Kareeba/Indiwi C.D.
3-71-72	I.D. CAMERON	Langimar C.D.
4-71-72	R.P. MORRISON	Aseki-Slate Creek Road Route. Watut L.G.C.A.
5-71-72	I.D. CAMERON	Kapu-Kabu C.D.
6-71-72	R.P. MORRISON	Handei & Nanima C.D.
7-71-72	R.P. MORRISON	Poiyu Road of Kapau/Nanima C.D.
8-71-72	I.D. CAMERON	Part Kapau-Kabu C.D.
9-71-72	R.P. MORRISON	Report at District H.Q.
10-71-72	I.D. CAMERON	Report at District H.Q.
11-71-72	P.D. OATES	Kapu/Kabu C.D.

.....



TERRITORY OF PAPUA AND NEW GUINEA

PATROL REPORT

District of... **MORobe** Report No... **1 of 1971/72**

Patrol Conducted by... **M. L. Macellar** (District Officer)

Area Patrolled... **KAIAPIT to MENYAMBA via MUMENG, SLATE CREEK and ASKI**

Patrol Accompanied by Europeans... **I. V. KNOX (A.P.O.)**

Natives... **Const. OMBA No. 2494**

Duration—From... **4 / 8 / 1971** to... **14 / 8 / 1971**

Number of Days... **11 Days**

Did Medical Assistant Accompany?... **NO**

Last Patrol to Area by—District Services... **27 / 4 / 1971**

Medical ... / / 19

Map Reference... **See attached Map**

Objects of Patrol... **1. Familiarization with road route.**

..... **2. Opening of Stock Route to MENYAMBA**

Director of District Administration,
PORT MORESBY.

Forwarded, please.

/ / 19
District Commissioner

Amount Paid for War Damage Compensation \$.....

Amount Paid from D.N.E. Trust Fund \$.....

Amount paid from P.E.D.P. Trust Fund

.....

.....

.....

DO

67-6-22

DEPARTMENT OF THE ADMINISTRATOR
P.O. Box 2396, KONEBOEU

67-6-22

31st December, 1971

The District Commissioner,
Morobe District,

LAH

MENYAWA PATROL NO. 1 of 1971/72

Your reference 67-2-3 of 10th November, 1971

I acknowledge with thanks receipt of Special Report by Mr. M.L. Mackellar A.D.C. of parts of Kalapit, Limong and Menyawa sub-districts

A brief report of a successful and unique patrol.

Photographs and report have been passed to D.I.E.S. for appropriate action.

It is unfortunate that in some areas... the regular... as one who... reports. This... of the... observed to... London... plunge to... anti-sabotary behaviour.

S. J. PEARSON
(S. J. PEARSON)
Secretary

The report is interesting and well...

SECRETARY

Popu

Table with columns: Females in Child Birth, in, M, F. The table is partially obscured and mostly illegible.

67-6-22.

(6)



DEPARTMENT OF THE ADMINISTRATOR

Telegram
Telephone
Our Reference
calling ask for
Mr.

17 NOV 1971
KONED

In Reply
Please Quote

No. 67-2-5

Morobe District,
LAE.

10th November, 1971.

The District Commissioner,
District Office,
LAE.

The Secretary,
Department of the Administrator,
KONEDOBU

MENYAMYA PATROL REPORT NO. 1 - 1971/72
MR. M.L. MACKELLAR, DISTRICT OFFICER

Herewith please find two copies of the report. This patrol was unique in that it escorted the first horses into the Menyanya area. No real problems were encountered in the journey but I feel it should be pointed out that Mr. Mackellar is an experienced hand in the movement of livestock. The care and attention given to the animals on this patrol was a good example to local people in the management and movement of livestock.

It is unfortunate that in some other parts of this District the popular image of the cowboy has been construed as one who shouts at and abuses animals to despair and rampage. This image is cast in American films. As a result of this popular image some local cattle owners have been observed to drive their beasts off cliffs' edges. The local herdsmen then stand and stare bewildered as the animals plunge to destruction, quite unable to understand such extraordinary behaviour.

The report is interesting and well documented with photographs.

(G.G. HARDY)
a/District Commissioner

SPECIAL REPORT

The purposes of this patrol were to familiarise myself with the proposed road route to Wau and to pioneer a stock route to Menyanya.

2. The patrol was arranged to coincide with my transfer from Kaiapit to Menyanya, for what better way is there for an ADC to see his new Sub-District than to walk through it.
3. Considerable interest was shown in the second object of the patrol both by the Lutheran Mission at Menyanya and the Catholic Mission at Kaintiba in Papua. Both missions are interested in encouraging cattle projects amongst the protein starved Kukukuku but until somebody discovered a stock route there was no way in which the store cattle could be moved out of the area except by prohibitive air freight.
4. Apart from a few minor mishaps the patrol discovered that the existing walking track to Wau is with a few alterations a suitable stock route, and the patrol brought two horses overland to prove it.
5. A major obstruction to the stock route was a ragged cliff face at Angabena where previously pedestrian traffic had been forced to scale a series of steep ladders some one thousand feet higher than the cliff bottom below. The horses were unable to climb these ladders and the patrol was halted for three days while a track was cut around the cliff. This track, now known as the Angabena Bypass has since become the popular alternate route to the ladders and will become part of the motor road to Wau.
6. Like a candle burning at both ends, the road to Wau is being built from both ends at the same time, because time is against us. Part of the proposed route passes over what must be the roof of New Guinea. From the tops of nearby peaks on a clear morning one can see the Gulf of Papua on one side and the Huon Gulf on the other. The route winds up towering mountain walls and down into plunging ravines and through the most tangled mountain terrain I have ever seen. Our first glimpse of the Tauri valley in the heart of the Kukukuku country was like a travelogue of the Andes. Yet this rugged mountain vastness will defeat us, because with the resources now available to us it is unlikely that we will complete the motor road before self government overtakes us.
7. It is unlikely that an independent government will continue to allocate the same degree of effort and funds to maintain roads such as these because their cost performance ratio is unfavourable. Our race against time is therefore to build as much of this road as possible before funding stops. As we will never get the whole road built within the life of the next House of Assembly it appears to me that it would be in the best interests of the people through whose land the proposed road passes, if we were to encourage them to build the sort of road which we know they can cope with long after the central government ceases to supply funds for it. That is to say, a good, well formed bridle path which can take livestock, bicycle, and motorcycle traffic in all seasons.
8. With this in mind I propose to encourage the construction of this sort of road which can be widened to take vehicular traffic if funds continue, but will nevertheless be still useable if they do not, on the grounds that if the worst happens, any road is still better than none.

M.L. Mackellar

M.L. Mackellar
Assistant District Commissioner
Menyanya.

PATROL DIARY

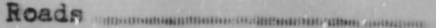
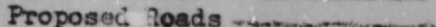
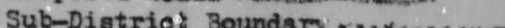


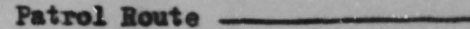
- 4-8-71 AM. Prepared for the departure of patrol. Horses loaded and patrol departed KAIAPIT at 1000 hrs by vehicle for MUMENG.
PM. Non stop to MUMENG and arrived at 1430. ADC Mackellar held talks with ADC Cook. Overnight at MUMENG.
- 5-8-71 AM. Departed MUMENG at 0800 and arrived Golden Pines saw mills at 1000. Unloaded horses. APO Knox to PAROROA by vehicle to establish camp and to arrange for carriers. ADC Mackellar proceeded along the Slate Creek road with the two horses.
PM. Camp established and ADC Mackellar arrived at 1800. Overnight at PAROROA.
- 6-8-71 AM. Departed PAROROA at 0900 for MENYI village.
PM. Arrived MENYI at 1400. Overnight at MENYI.
- 7-8-71 AM. Departed MENYI at 0900 for ANGGAIK village.
PM. Arrived ANGGAIK at 1430. Slight mishap en route - one horse fall from the mountain track. Overnight at ANGGAIK.
- 8-8-71 AM. Departed ANGGAIK at 0830 for HIAKWATA village.
PM. Arrived HIAKWATA at 1530. Overnight at HIAKWATA.
- 9-8-71 AM. Departed HIAKWATA at 0830 for ANGABENA village.
PM. Arrived ANGABENA at 1430. Another mishap en route when one horse fell through a bridge. 1530 APO Knox departed to survey a suitable track to by-pass the vertical ladders. Unable to find a suitable route and returned ANGABENA at 1800. Overnight at ANGABENA.
- 10-8-71 AM. ADC Mackellar inspected the ANGABENA by-pass for suitable route to connect ANGABENA with the ASEKI/WAU road. APO Knox checked other walking tracks in the area. None found to be suitable.
PM. ADC Mackellar inspected road gangs and talks held with village officials re the construction of a by-pass road. Overnight at ANGABENA.
- 11-8-71 AM. APO Knox to ASEKI for discussions with the OIC and to replenish supplies. ADC Mackellar worked with new road gang on the construction of the by-pass.
PM. APO Knox returned at 1415. Assisted with road work. Half the road completed. Overnight at ANGABENA.
- 12-8-71 AM. Road construction continued from 0800 to 1700.
- 13-8-71 AM. 0800 to 1200 by-pass road completed.
PM. Patrol moved from ANGABENA to the ASEKI/WAU road road camp. Overnight at road camp.
- 14-8-71 AM. Departed road camp at 0900 for MENYAMYA.
PM. Arrived MENYAMYA at 1900.

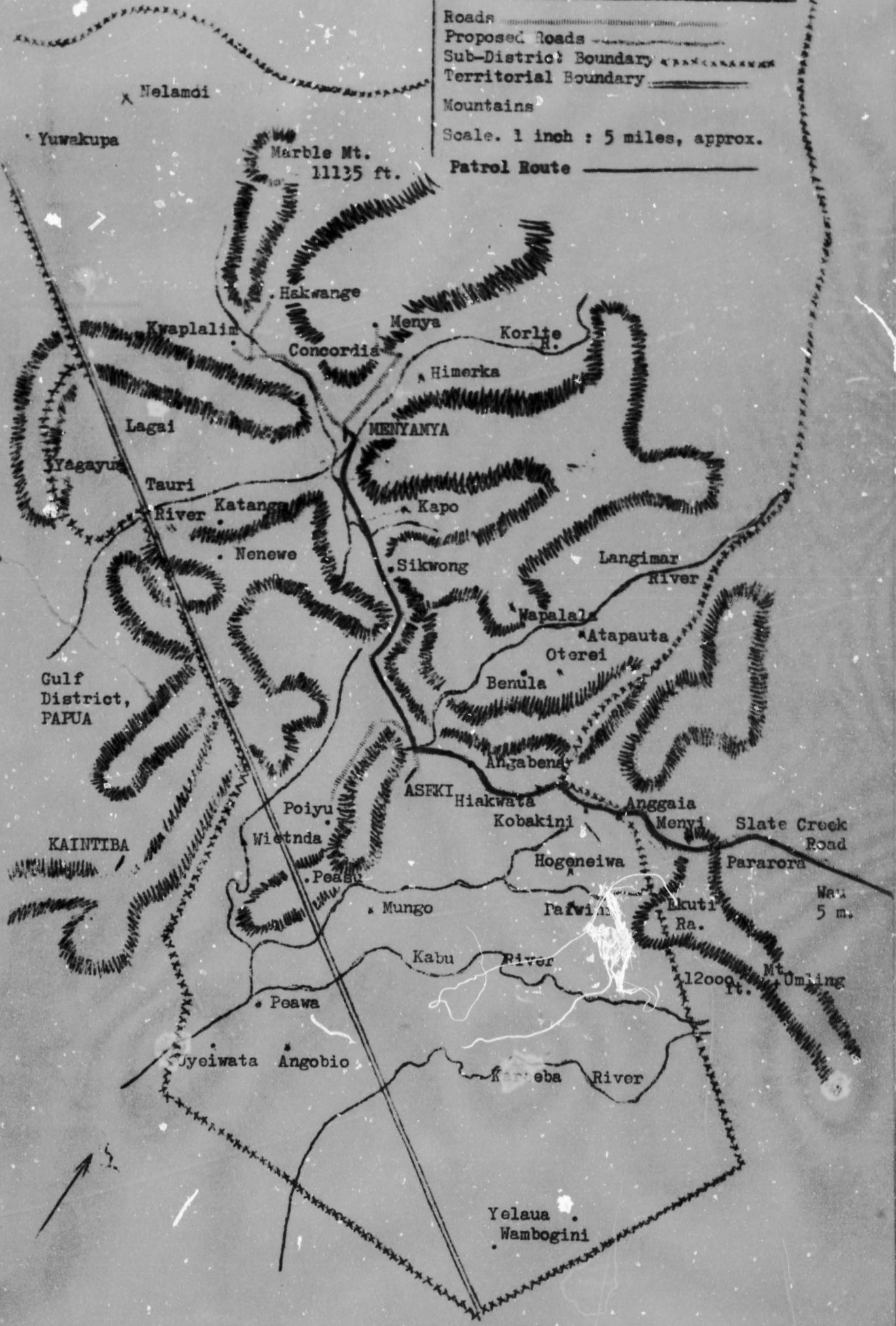
END OF PATROL

Map of:
 MENYAMIA SUB-DISTRICT
 Morobe District
 by I.V.Knox, APO.

Eastern Highlands District

Legend

Roads 
 Proposed Roads 
 Sub-District Boundary 
 Territorial Boundary 
 Mountains 
 Scale. 1 inch : 5 miles, approx.
 Patrol Route 





Kukukuku and horse see each other for the first time. Horse not impressed.



It was cold on the roof of New Guinea. APO Knox rugs the horses for the night.



Horses rations were carried in a Patrol box and served in this manner.



Negotiating a narrow mountain track.



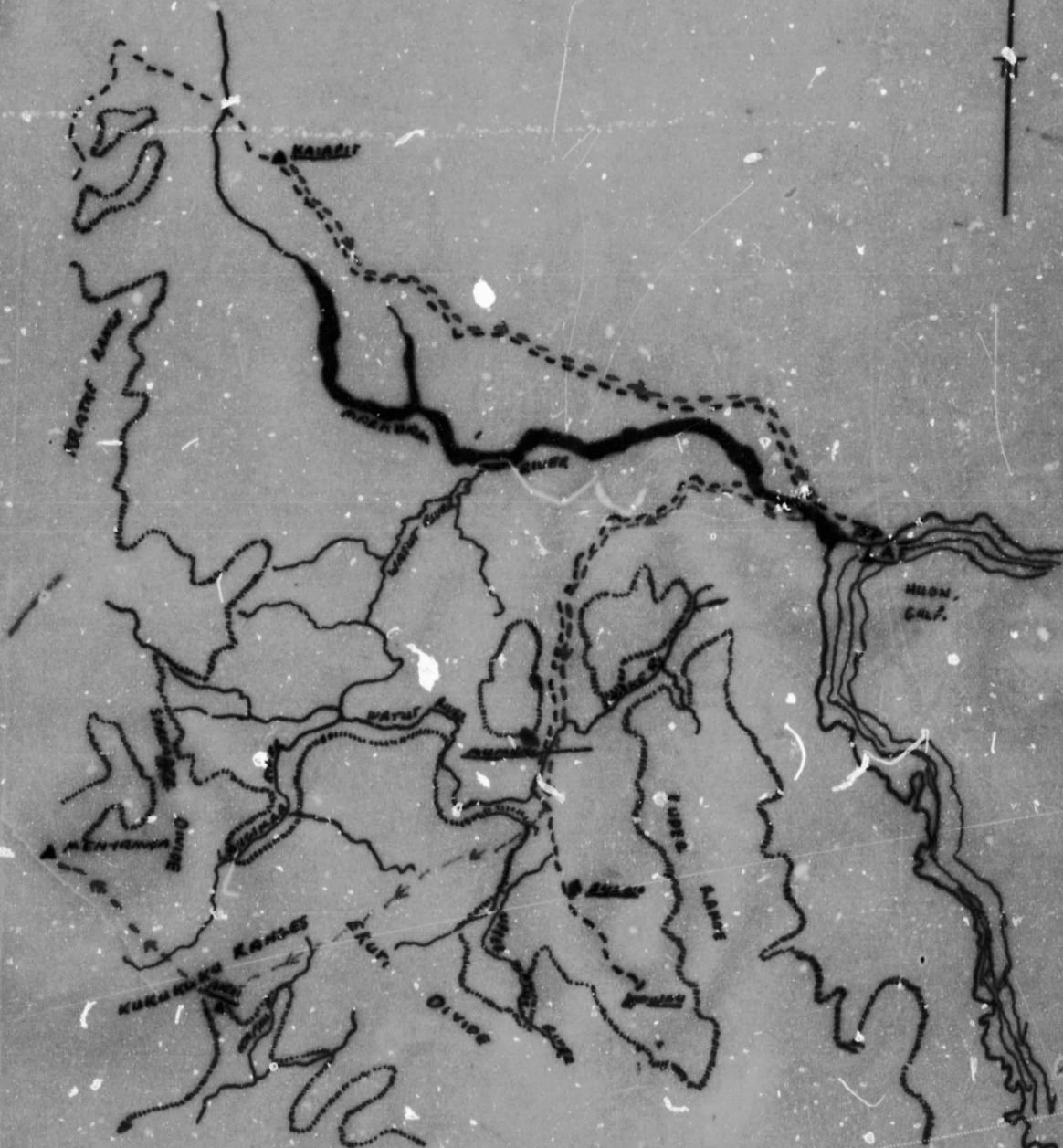
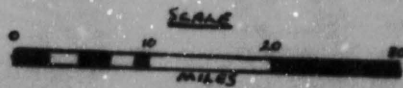
The Angabena By-Pass



Patrol arrives at the Motor Road head at Angabena, 25 miles from Menyama.

LEGEND

- 1 - - - - HIGHWAY ONLY
WAS ROAD
- 2 - - - - MOUNTAIN RANGE DUAL (m)
- 3 - - - - TRAIL ROUTE



OA/JK

P.O. Box 2396 - Enejobu

67-643/25-2-6

18th January, 1972

The District Commissioner
Morobe District
Lae.

MIRIAMBA PATROL NO. 2 of 1971/72

Your reference 67-2-5 of 6th January, 1972.

I acknowledge with thanks receipt of a Report by
MR. L. SAYER A.P.O. of the Wapi Census Division.

Copies of patrol instructions terminate at your
headquarters as do routine patrol reports. My 67-1-0 of
25th November, 1971 refers.

Mr. Sayer should have prepared a Situation Report
concisely detailing the current state of the road following
his work. Other situation reports would cover any other
observations made which would be of value at this level (if
applicable).

Whilst still in the experimental stages this
bridging technique should not be too widely extended,
especially on larger streams, as a mass failure would cause
considerable loss of goodwill. Caution is indicated.

(S.J. PEARSALL)
s/Secretary

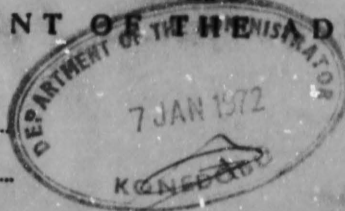


68A 67-6-43
7

DEPARTMENT OF THE ADMINISTRATOR

Telegrams
Telephone
Our Reference
If calling ask for
Mr.

67-2-5



In Reply
Please Quote

No.
Morobe District,
LAE.

6th January, 1972.

The Secretary,
Department of the Administrator,
KONDUBU

MENYAHYA Patrol Report No. 2 - 1971/72
Mr. L. Sayer, Assistant Patrol Officer

Herewith two copies of a report by Mr. Sayer. This report is an account of field work between November and December when Mr. Sayer was engaged on road construction and maintenance. No specific Situation Report is attached but whatever information was of importance was passed to the A.D.C. regularly as the patrol was in constant communication with the station.

Comments by the Assistant District Commissioner are attached. It remains to be proved over time and with the given conditions, that the porous "leaking dam technique" bridges will withstand washout.

Mr. Sayer applied himself well to the job and he is to be complimented for the results achieved.

R. Galloway
(R. T. GALLOWAY)
District Commissioner



DEPARTMENT OF THE ADMINISTRATOR

Telegrams
Telephone
Our Reference..... 67-1-3
If calling ask for
Mr.....

In Reply
Please Quote

No. 124

Sub-District Office,
Menyanya,
Morobe District

25th December, 1971.

The District Commissioner,
Morobe District,
LAE

Subject: MENYAMYA PATROL No. 2 - 71/72.

Please find attached three copies of the report of the above patrol and camping allowance claims.

2. The work carried out by this patrol was an interesting experiment. For years in this Sub-District we had been building bridges with inferior timber, the only sort of timber we have, when in all that time in the creeks we were bridging, lay an untapped potential in stone.
3. On 27th October, 1971 whilst in Lae for the Liquor Inquiry I discussed this matter with the Professor of Engineering at the Institute of Technology, Professor E.M. Laursen. He thought we could bridge with stone, and he gave me a few rules of thumb to follow.
4. Mr Sayer on this patrol applied these rules and as a result, the first 14 miles of the Menyanya - Kaintiba road has 112 stone bridges of various sizes, but mostly less than 6 feet in length. I built the last five bridges and the last two miles of road myself, to see how the system was working.
5. Results speak for themselves. The road cost only \$50 per mile and none of the bridges took more than one day to build. The largest bridge cost \$10. Since the patrol started, only 6 inches of rain has fallen, but all the bridges have withstood the flash flooding which followed every downpour. I believe we have discovered the secret of building cheap sturdy bridges and I propose to build stone bridges along the Menyanya - Wau road early in the new year. I am convinced, particularly after the recent fatal accident along that road, that the stone bridge is the only answer to the existing maintenance problem.
6. Mr Sayer did an excellent job during this patrol.

(M.L. Mackellar)
Assistant District Commissioner.



TERRITORY OF PAPUA AND NEW GUINEA

5

Telegrams
Telephone
Our Reference.....
If calling ask for
Mr.....

In Reply
Please Quote

No.

Department of the Administrator,
Sub-District Office,
Menyama,
Moro District

6th November, 1971

Mr Assistant Patrol Officer, L.Sayer,
Menyama

Subject: MENYAMA PATROL No. 2- 1971-72.
Patrol Instructions

This is a special patrol, with the sole object being the reconditioning of the Menyama - Kaintiba road.

2. Please begin this patrol on 8th November, 1971 at the Menyama end of this road by reconditioning this road to motor cycle standard and by working progressively down the road towards Papua.
3. Please recruit a labour line in the manner to be shown to you by Mr ADO Connor on the first day of the patrol, and be guided by him in all matters of labour management and road construction.
4. With the exception of the ford across the Wapi River, all the creeks, culverts and drains you encounter along the road are to be bridged with stone, using the leaking dam method. Under no circumstances are timber bridges to be built without my consent. You must be present as each bridge is built to ensure that the labour is used properly and the bridge is built sensibly.
5. Please record in your Field Officers Journal the work you do each day. Where you bridge a creek, record the name of the creek, and where you repair a section of road identify that section sufficiently in your journal. Also please record the number of men who appear for work each day and if they are being paid wages or piece work.
6. To begin with you may travel to and from the road head each working day, but if you do so you must still complete a full day's work on the road each Monday to Friday. That is to say, you must complete at least seven hours work on the road each day, whatever times you use. Please record in your journal the actual times you work on the road each working day. Wherever possible, working times should suit the labour line, given that they also must complete seven hours work each working day. Thus, if they prefer to work from 6am to 1pm and have the rest of the day off, please arrange for this.
7. When travelling time to and from the road head each day becomes a burden, you should move onto a road camp. You should move this camp progressively down the road from time to time to be reasonably close to the centre of roadwork activity, at all times.
8. All disputes and inquiries and complaints which are brought to your notice should be referred to this office in a friendly manner. You should also adopt a friendly manner in your dealings with all land owners along the road because it is inevitable that some damage will be caused to adjoining land during the construction of bridges and other road workings, so if you must damage, do it in a friendly manner, and if you are able to forecast what damage is likely at any given place along the road, discuss it first with the land owner.

4

9. From time to time you will be recalled to the station for other duties. When this happens you should record this in your journal. Immediately the other duties are complete, you should return to your roadwork without further instruction.

10. This patrol will end when this road has been reconstructed to motor cycle standard and when the reconstructed section reaches a big rock face which blocks the road about four miles past Watuma village. Please then return to station duties and submit a patrol report in the usual form. I wish you a pleasant patrol.



(M.L. Mackellar)
Assistant District Commissioner.

Patrol Report.

3

Report Number: 2 of 1971/72.

Objects of Patrol: Reconditioning of Menyanya-Kiantiba Road.

District: Morobe.

Station: Menyanya.

Patrol Conducted by: L.D.Sayer. A.P.O. Sub District: Menyanya.

Area Patrolled: Menyanya-Kiantiba Road. Designation: Assistant Patrol Officer.
Wapi Census Division.

Duration of Patrol: 8th November 1971 to 10th December 1971. Personnel Accompanying: Nil

Last D.D.A. Patrol.: February 1971. Number of Days: 25

Last O.L.G. Patrol: Nil Total Population of area.: 1759

Map Reference: Formil of Wau. Council Area: Nil.

House of Assembly Electorate: Menyanya.

The District Commissioner,
Morobe District.

In respect of this patrol, I attach
Field Officers Journal, Folios 7 to 10
Patrol Instructions
The Report and My Comments
Area Study
Updating of Area Study
Situation Reports
Patrol Map

(Yes) ✓
(Yes) ✓
(Yes) ✓
(No)
(No)
(No)
(No)

Date: 20/12/71

.....
Assistant District Commissioner.

The Secretary
Department of the Administrator
Division of District Administration
Konedobu . Papua.

In respect of this patrol I attach
Area Study,
Updating of Area Study,
Situation Reports No's 1-
.....
.....



District Headquarters Assessment of
Patrol and Report.....

Above Average.
Average.
Below Average.

Date: / /19 .

.....
District Commissioner.

Patrol Report No. 2 of 1971/72.

Station: Menyanya.

Officer Compiling: L.D.Sayer. A.P.O.

District: Morobe

Sub-District: Menyanya.

Census Division: Wapi

L.G.Council: Nil.

The sole purpose of this patrol was the reconditioning of the previously completed section of the Menyanya-Kiantiba road up to a point approximately 4 miles past the village of Watama, and about 12 miles from Menyanya station, with special emphasis on the construction of stone bridges using the 'leaking dam' technique. All of the existing wooden bridges were in a rotten and unsafe condition thereby rendering the road impassable to vehicular traffic.

1. The general topography of this section of the road is as follows. It branches off the Menyanya-Aseki road about 1/4 mile from the station and descends to the Wapi river; a by-pass road and ford crosses the river and connects with the main road. The road then follows the river south along the Tauri valley. It gradually climbs to a point about 6 miles from Menyanya and then diverges east into the Watama valley. It skirts the Northern side of the Watama valley for about 4 miles until it reaches Watama village and then returns in a Westerley direction along the Southern side of the valley, still climbing gradually. The point reached by the patrol is about mid-way along the Southern side of the valley. The road is of motor-cycle width and averages 6-8 feet.

2. In accordance with patrol instructions a labour force was recruited from the neighboring villages. No difficulty was experienced in obtaining labourers which indicates a degree of local interest in the presence of the road.

3. Work was commenced, using village labour, on 9th November, 1971, at a point about 2 miles from Menyanya and just opposite Hengwa village. This section had been left untouched during the construction of the original road for approximately 300 yards and the road continued on the other side. Bridges had been replaced, a ford constructed across the Wapi river, and the road generally repaired up to this point during the preceding fortnight by myself using Station and Corrective Institution labour.

4. For the first few days I travelled from Menyanya to the work-site on a daily basis; however, this soon became impractical and I found camping out to be more convenient. I operated from 3 camps during the patrol; the first at Hengwa village, the second at Yai river-about 3 miles past Hengwa, and finally from Watama village, in all camping out for 16 nights. I returned to Menyanya each Friday afternoon and resumed the patrol again on the Monday mornings.

5. During the 5 working week duration of the patrol, approximately 10 miles of road was cleared, all existing wooden bridges were replaced with stone, approximately 300 yards of new bench-cut road was made and the existing road widened where necessary. In all, 107 stone bridges were constructed; of these 31 were large (for purposes of classification large being over 6 feet in length and/or depth), and 76 small (below this size). The large bridges were mostly across creeks and some large culverts, the small over smaller culverts and drainage ditches. The largest being up to 20 feet long and/or 10 feet deep.

1

6. A 7 hour working day was maintained, starting at 7 am and finishing at either 2 or 2.30 pm depending on the preferences of the labourers for a half-hour or hour lunch-break. Organised in groups of villages on a roster basis, each group was intended to work ~~on~~ a fortnight at a time. The first group-from Hengwa, Wiama, Kwakape and Kainye villages -numbered 97 men and youths, the second group-from Watama, Anjua, Pekapoinyl and Katanga villages-numbered 115 men and youths, and the third group (again from Watama, Anjua and Katanga due to the closeness of the work site to these villages) numbered 142. This last group however, contained about 60 boys and 27 women.

7. The labourers were quick to grasp the principle of this kind of bridge construction and rapidly became adept at man-handling large stones using crow-bars, levers and liana-ropes. The 'leaking dam' technique of bridge construction seems admirably suited to local conditions as it requires only stones of varying sizes as the building material, of which there is an abundance in this area. This method, consists of building a base of large stones-which allows the water to flow through the gaps between and under them-and adding stones of diminishing size on top, this is being again top-dressed with earth or gravel. Smaller bridges are built by making a series of archways to form a tunnel which is also covered with earth. I feel that teaching the local people to construct this type of bridge is an educational gain which could be of considerable use to them in the future.

8. As extensive rains fell in the area whilst I was walking on several occasions I was able to assess the strength of the bridges under stress. All held, and although the top-dressing was dislodged in some cases, all remained passable. Where the volume of water became too great then it simply spilled over in a steady flow. The bridge however generally remained quite passable.

9. I did not reach my original objective, the rock barrier about 4 miles past Watama village, as I was ordered to return to the station by Mr. A.D.C. Mackellar on 10th December; at this time the work had progressed to a point about 2 miles past Watama, approximately 2 miles short of the rock barrier. Thus the patrol commenced on 8th November, 1971 and finished on 10th December, 1971, and consisted of 25 patrol days.

L D Sayer

L.D.Sayer.
Assistant Patrol Officer.

The Secretary,
Department of the Administrator,
Division of District Administration,
KORORUA, P.O. BOX 100

In respect of this patrol, I attach
AREA STUDY,
OPERATING OF AREA STUDY,
SITUATION REPORT NO. 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

PATROL REPORT

REPORT NUMBER: 3-71/72	OBJECTS OF PATRO: Road Construction
DISTRICT: Morobe	STATION: Menyanya
PATROL CONDUCTED BY: M.L.Mackellar, ADC	SUB-DISTRICT: Menyanya
AREA PATROLLED Kaintiba Road	DESIGNATION: ADC
DURATION OF PATROL: 5 days	PERSONNEL ACCOMPANYING: G.C. Connor, ADO
LAST D.D.A. PATROL: 10/12/71	NUMBER OF DAYS: 25
LAST O.L.G. PATROL: nil	TOTAL POPULATION OF AREA: 1759
MAP REFERENCE: Map attached	COUNCIL AREA: nil

The District Commissioner,
Morobe District,
LAE.

In respect of this patrol I attach

FIELD OFFICERS JOURNAL, FOLIOS 22 to	(✓)
PATROL INSTRUCTIONS,	(x)
THE REPORT AND MY COMMENTS,	(✓)
AREA STUDY,	(x)
UPDATING OF AREA STUDY,	(x)
SITUATION REPORTS NO'S. 1-	(✓)
PATROL MAP,	(✓)
Photographs of a stone culvert, and various.....	(✓)
scenes and points of interest on the Kaintiba road.	

DATE: 25/1/1972

M.L. Mackellar
.....
Assistant District Commissioner

The Secretary,
Department of the Administrator,
Division of District Administration,
KONEDOBU. Papua

In respect of this patrol, I attach

AREA STUDY,	(-)
UPDATING OF AREA STUDY,	(-)
SITUATION REPORTS NO'S. 1 -	(✓)
..... STONE CULVERTS	()
.....	

DATE: / /19 .

.....
District Commissioner

OA:MG

P.O. Box 2396,
KONEDOU.

67-6-56

15th March, 1972.

The District Commissioner,
Morebe District,
LAH.

MENYAMBA PATROL NO. 3 OF 1271-72.

Your reference 67-2-5 of 28/2/72.

I acknowledge with thanks receipt of the Situation Report arising out of the above Patrol of the Wapi Census Division, together with the appropriate assessment, as submitted by Mr. M. Mackellar, A.D.C.

I hope that Mr. Mackellar's enthusiasm is justified.

The photographs provide a very good idea of the technique and the difficult country involved.

(T.W. ELLIS)
Secretary.

DA 67-6-56



DEPARTMENT OF THE ADMINISTRATOR

Telegrams
Telephone 67-2-5
Our Reference
If calling ask for
Mr.



In Reply
Please Quote

No.
Morebe District,
LAE.
28th February, 1972.

The Secretary,
Department of the Administrator,
KONEDOBU

2. Reference is made to the Patrol Report MENYAMYA No. 3 - 1971/72 with information that the only person who was involved in the construction of the culverts was Mr. M. L. Mackellar, Assistant District Commissioner.

3. While in the report (Situation Report - Road Construction) this matter was referred to the Department of Engineering at the Institute of Technology, Port Moresby.

Report on road construction (stone culverts) and photographs by Mr. Mackellar are forwarded.

The road under construction is the MENYAMYA - KALNTIRA Road. Initially it is being constructed to a motor cycle/livestock standard only. If the economy and social standards of the residents justify improvements at a later date, then the road can be upgraded.

The report deals particularly with the construction of stone culverts. The method of construction is new to the area and I believe that it remains to be proved over a period of time that the culverts will sustain flooding, blockage and washout. The trial is certainly worth the effort and cost as timber bridges and culverts have proved to be most insecure.

R. T. Galloway
(R. T. GALLOWAY)
District Commissioner

67-25-5

SITUATION REPORT NO. 1

Station: MENYAMYA

Officer Compiling: M.L.Mackellar, ADC

District: Morobe.

Sub-District : Menyamy a.

Census Division: Wapi

L.G.Council : Nil.

Subject: STONE CULVETS

This matter is reported because of its Territory wide significance, but more particularly, for its application in remote inland areas where funds are scarce and airfreight on building materials is considerable. I am sure it is of considerable economic importance that we have discovered a method of bridging creeks at no cost at all.

2. For years in this Sub-District, we had been building bridges with inferior timber, the only sort of timber we have, when in all that time in the creeks we were bridging, lay an untapped potential in stone.

3. While in Lae for the Liquor Inquiry on 27/10/71, I discussed this matter with the Head of the Department of Engineering at the Institute of Technology, Professor E.M.Laurenson. He thought we could bridge with stone and he gave me a few rules of thumb to follow.

4. We applied these rules and as a result, the first 14 miles of the road to Kaintiba has 112 stone culverts, of varying sizes, most less than 6 feet in length. The largest of these culverts cost us \$10, and that cost was for labour only. Materials cost nothing, because the only material we used was what we could find in the creeks. In areas where Road Maintenance Rules supply free labour, these culverts would cost nothing at all.

5. One purpose of this exercise was to show the people, that bridges can be built without tools, nails, cement, steel, timber or money. All that is required is brains and a brain.

6. The attached photographs show a creek before a culvert is made and after it is made. Stones from the creek were simply selected by size and shape and locked together like a jigsaw puzzle in an arch formation. To give an even road surface, the top of the structure was then paved with gravel from the creek bed.

7. None of the materials in this culvert can rot, rust, wear or decay, and we have learned to build culverts which will last forever, at no cost at all.



(M.L.Mackellar)
Assistant District Commissioner.

Map of:
MENYAMYA SUB-DISTRICT
 Morobe District
 by I.V.Knox, APO.

Eastern Highlands District

Legend

Roads
 Proposed Roads
 Sub-District Boundary
 Territorial Boundary

Mountains
 Scale. 1 inch : 5 miles, approx.

The Kaintiba Road completed to motor cycle standard:



MOMENTS OF TENDERNESS
ON THE KAJINTIBA ROAD.



A Kukukuku child discusses
the finer points of horses
with ADC Mackellar.



A Kukukuku child halts the
Patrol - with a gift of food
for ADO Connor's horse.

STONE CULVETS



A creek on the Kaintiba road
and workers selecting stones
to rearrange into a culvet.



The same creek after the culvet
has been constructed. Note that
this picture was taken from the
same position as the one above
with the same rock and the same
blade of grass in the foreground.

MENYAMYA PATROL No. 5 - 71/72



Looking towards Menyama,
and five miles from it,
part of the Kaintiba road.



ADO Connor puts his finger
on the trouble spot; a
vertical rock formation
intersecting the Kaintiba
road 14 miles from Menyama.
The road is open to motor
cycle traffic to this point.
The blue mountain in the
far background is in Papua.



Kukukuku children examine the
narrow path blasted across the
rock face. 2000 feet below is
the Tauri River., flowing
into Papua.

JAW:MD

P.O. Box 2396,
KOMEDOHU.

67-6-62

22nd May, 1972.

The District Commissioner,
Morobe District,
P.O. Box 572,
LAE.

MENYAMBA PATROL NO. 4 - 1971/72.

I acknowledge with thanks receipt of notification of the above patrol of the WEST and SOUTH WEST Census Divisions, as submitted by Mr. I.V. Knack, Assistant Patrol Officer.

The attached solitary page: was all that was received at this Headquarters - are there any more documents to accompany it?

Please forward me an extract from the Patrol Report dealing with the House of Assembly elections.

(T. W. ELLIS)
Secretary.

.../Encl.



801967 - B-63

PATROL REPORT

REPORT NUMBER: 5 of 1972/72. OBJECTS OF PATROL: House of Assembly Elect.
 DISTRICT: Morobe STATION: Sub-District Office Menyanya.
 PATROL CONDUCTED BY: L.D. Sayer SUB-DISTRICT: Menyanya
 AREA PATROLLED: Northern Census Div. DESIGNATION: Assistant Patrol Officer
 DURATION OF PATROL: 16 Days PERSONNEL ACCOMPANYING: See Patrol Report
 LAST D.D.A. PATROL: 27.4.71 NUMBER OF DAYS: 22
 LAST O.D.G. PATROL: Nil TOTAL POPULATION OF AREA: 5989
 MAP REFERENCE: Journal of Wau COUNCIL AREA: N/A

The District Commissioner,
District,

In respect of this patrol I attach
 FIELD OFFICERS JOURNAL, FOLIOS 14 TO 16 , (✓)
 PATROL INSTRUCTIONS, (X)
 THE REPORT AND MY COMMENTS, (✓)
 AREA STUDY, ()
 UPDATING OF AREA STUDY, ()
 SITUATION REPORTS NO'S 1 - ()
 PATROL MAP, ()

DATE: 10/4/1972.

[Signature]
 Assistant District Commissioner.

The Secretary,
Department of the Administrator,
Division of District Administration,
KONEDOBU. Papua

In respect of this patrol, I attach
 AREA STUDY, ()
 UPDATING OF AREA STUDY, ()
 SITUATION REPORTS NO'S. 1 - ()

DATE: 27/4/1972 .

[Signature]
 District Commissioner.

CAW:JB

P.O. Box 2396, KONGORU.

67-6-63.

19th May, 1972.

The District Commissioner,
Morobe District,
L.A.K.

MENYAMA PATROL NO. 5 - 1971/72.

Your unreferenced minute of the 27th April refers.

I acknowledge with thanks receipt of notification arising out of the above patrol of the Northern Census Division, as submitted by Mr. L.D. Sayer, Assistant Patrol Officer.

Would you please forward me the section of the report dealing with the House of Assembly elections which Mr. Sayer was involved in.

Also an assessment of the report, i.e., above average/average/below average.

(T.M. ELLIS)
Secretary.

JAW:MD

P.O. Box 2396,
YONINDOBU.

67-6-85

3rd August, 1972.

The District Commissioner,
Morobe District,
P.O. Box 572,
LAE.

MENYANYA PATROL NO. 6 - 1971/72.

Reference your minute 67-2-5 of the 11th July, 1972.

I acknowledge with thanks receipt of notification of the Report of the above patrol, as submitted by Mr. I.V. Knox, A.P.O.

Please forward a copy of the report cover for my records.

The Secretary,

Department of the Administrator,

MONGHON.

(T.W. ELLIS)

Secretary.

The patrol reconstituted a concrete road near the
Pat 12/12. This replaced the ASKHI-12/12 road
(No. 1 wheel drive vehicle) which was closed last
year following the collapse of a bridge.

No alternative reports arising out of this patrol
are forwarded.

(S. G. SMITH)

SAFETY AND SECURITY

67-2-5



Herebe District,
P.O. Box 572,
LAE

11th July, 1972.

The Assistant District Commissioner,
Sub-District Office,
MENYANYA.

Report attached.

Patrol Report MENYANYA No. 6 - 1971/72
Mr. I. V. Knox, Assistant Patrol Officer

Receipt of the report by Mr. Knox, your comment
and assessment are acknowledged with thanks.

The patrol has completed a project of long lasting
value to the community.

I would appreciate further details of the "Several
cattle projects which are now in existence in the
Kape area."

(G. G. HARDY)
a/District Commissioner

c.c. The Secretary,
Department of the Administrator,
KONEDOBU.

The patrol constructed a concrete ford over the
Pai River. This reopened the ASEKI-MENYANYA road
(to 4 wheel drive vehicles) which was closed last
year following the collapse of a bridge.

No situation reports arising out of this patrol
are forwarded.

G. G. Hardy
(G. G. HARDY)
a/District Commissioner