

D E V E L O P M E N T P R O G R A M M E

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P R O G R E S S R E P O R T

for the

Quarter ended 30th June, 1960

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APPENDIX - FINANCIAL STATEMENT

GENERAL REVIEW

A. FINANCIAL

Expenditure on Development Projects for the quarter ended 30th June, 1960 of the new 1960-1964 Programme amounted to \$3.66 mn. which together with the expenditure of \$2.24 mn. in the previous quarter brought expenditure for the year to \$5.9 mn.

Details of expenditure for the year to the end of June are given in the Appendix to this Progress Report.

Drainage and Irrigation (\$2.5 mn.), Public Works (\$1.5 mn.), Post Office (\$0.5 mn.), Geological Surveys (\$0.25 mn.), Transport and Harbours (\$0.23 mn.), Agriculture (\$0.21 mn.), Housing (\$0.2 mn.) and Health (\$0.1 mn.) accounted for \$5.48 mn. of the total expenditure of \$5.9 mn. for the period 1st January to 30th June, 1960.

The table below shows the rate of expenditure for the two quarters in 1960 with corresponding figures for 1957, 1958 and 1959.

<u>Quarter</u>		<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
		\$ mn.	\$ mn.	\$ mn.	\$ mn.
January/March	2.7	3.1	2.4	2.24
April/June	4.5	5.2	5.2	3.66
		<hr/>	<hr/>	<hr/>	<hr/>
		7.2	8.3	7.6	5.9
		<hr/>	<hr/>	<hr/>	<hr/>

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B. WORK PROGRESS

Agriculture: Development of the coconut industry continued and during the quarter 67,222 selected nuts had been sown as compared with 133,370 during the quarter ended March. 41,044 seedlings were sold during the quarter. Maintenance and propagation continued on all cocoa stations. 29,400 cuttings were propagated, 9,274 plants basketed, 8,618 distributed and there were 8,858 on the hardening floor.

Work on the Stations continued. The installation of electricity for the Stock Farm at the Central Agricultural Station was started. At Hosororo the planting of clones was started on the 26½ acres of land cleared and the citrus nursery was extended. Construction of the three type 107 houses continued. At Ebini older pastures were renovated and subdivided. Thirty steers were shipped from this Station to Georgetown. One of the steers, twenty-three months old, gave a carcass weight of 510 lbs. A three-acre field was sown with corn at St. Ignatius where the herd at the end of the quarter totalled 547. Experiments with planted pastures continued.

Soil Surveys continued in the Tapakuma and Tappa areas.

At Onverwagt all main works were completed and ten ponds totalling some 57 acres were in operation. 5,346 fish were introduced to the ponds of which 103 specimens between 9-15 cm. in length were fin-clipped for growth rate studies. Fencing was completed on three sides of the Station. Continuous and complete records of all data at the Station were maintained.

/Civil

Civil Aviation: Work on the Kamarang Airstrip continued and some of the equipment for Atkinson Field to replace that destroyed by fire were received.

Drainage & Irrigation: Good progress was maintained on all works in the Black Bush Polder area. At the end of the quarter various minor modifications to the lifting mechanisms were completed at Lesbeholden and in progress at Mibikuri and Joppa. The Joanna/Yakusari and Yakusari regulators were completed except for the fixing of lifting ropes. Work on the construction of tailwalls, water course regulators and road bridges continued.

In the Boerasirie area earthworks were completed on the Main Crown Dam to a point near Leonora. Excavation to the Vergenoegen Intake and de-silting operations on the Parika/Lookout and Parika/Hydranie facades were completed. All structures were in good order and at the end of the quarter the construction of greenheart boxes across berms in the facade drains on the East Bank, Essequibo was completed.

In the Minor Drainage Works Programme earthworks were completed in the East Demerara. In the West Demerara clearing of the Fellowship side line trench and digging of approximately 1,460 rods of the Den Amstel east side line were completed. Work was also completed at North Pouderoyen. In Berbice two bridges were built at Lancaster/Manchester and one at Rosehall. The empoldering of the Gibraltar Sea Sluice was completed. Approximately 45% of the excavation work at Fyrish was completed.

Surveys were carried out in the frontlands of the Mahaica/Berbice area. The stage and rainfall recorders continued to be operated and maintained in the Mahaica, Mahaicony, Abary and Canje Rivers and the gauging station at Manarabisi was re-activated. Flow discharge measurements were taken in the upper regions of the Mahaicony and Mahaica Rivers.

Education: At the end of the quarter construction was in progress on four primary schools in Berbice, three in Demerara and one in Essequibo. Work on the Domestic Science Department for Arthurville was started. Sanitation work at Diamond Government School was 90% completed.

Industry and Credits: Loans made and repayments received by the Credit Corporation during the quarter totalled \$704,580 and \$602,247 respectively.

Geological Surveys: All field expeditions returned to Georgetown in May. Work on the bauxite of the Pakaraima Mountains continued; it was established that deposits extend from upper Potaro westwards in the upper Kamarang valley. Progress was made in mapping the hitherto unmapped areas in the Puruni River basin and in re-mapping the area between Peters Mine and Aremu Mine. The aerial survey of the Mazaruni Area was completed and the results received.

Health: The Cottage Hospital at Mahaicony was 98% completed and those at Leonora and Leguan were both 90% complete. Two more Health Centres were completed in Demerara, while two others were 69% and 50% completed. In Essequibo construction on three Health Centres was in progress, these were 95%, 85% and 50% completed. Seven of the eight buildings for Berbice were each 80% completed.

/ Land

Land Development: At Lesbeholden 106 plots were cleared of some 616 acres of bush. 159 settlers were allocated holdings of approximately 17 acres each and have started to erect homesteads. In the Essequibo 117 rods of the Lima North Drainage trench were dug and 5 acres of land at Reliance "E" cleared of bush for the planting of rice. Sixty-five acres of bush were also cleared in the Barnwell Savannah pasture at Vergenoegen and some forty-four acres at Cane Grove.

Greenheart boxes were constructed at Mara and in the Essequibo and outlets were dug to drain the second cross dam at Garden of Eden.

Post Office: The Exchange Building at Skeldon was completed and only the fitting of doors and windows remained of the Power houses at Anna Regina and Mahaicony. The radio building at Mon Repos and the 5 $\frac{1}{4}$ pair trunk cable from Georgetown to Mon Repos were completed.

Public Works: Surveys of the Parika/Bartica and Potaro/Lethem Roads continued. The Bartica/Potaro Road was completed between 8 and 9 Miles and stabilised with stone in sections. Clearing and grubbing had reached 12 $\frac{1}{2}$ Miles and formation work 10 $\frac{3}{4}$ Miles. The main structure of the Diamond Bridge on the East Bank Road was completed and the approaches were 90% completed. Four concrete culverts were constructed at Coverden and erection of a sluice gate on the culvert at Friendship was started.

In the Sea and River Defences Programme work on the casing of Uitvlugt Wall was completed.

At the end of the quarter the construction of the houses at Mahaicony for the Social Assistance Officer and the Agricultural Instructor, the office for the Overseer and Foreman and storeroom at Anna Regina and the garage and stores at the District Commissioner's Office, Vreed-en-Hoop were 60%, 30%, 95% and 90% completed respectively.

The laying of Pure Water Supply pipe lines was completed in the Plaisance/Sparendaam area, at Mahaica, Chelsea Park, DeKinderen, Sandvoort and in the Sisters, Rotterdam and Kortberaad areas. The construction of an overhead tank and windmill was completed at Aurora.

Transport and Harbours: Demolition work at the Georgetown Ferry Terminal was completed and the reconstruction and extension of the Vreed-en-Hoop Ferry Terminal and Goods Depot continued. Minor works were carried out to the Stellings at Morawhanna, Adventure and Stanleytown. Installation of the new engine for the m.v. "Barima" continued.

Seven lighted beacons were erected in the approaches to the Waini Bar and Mora Passage. Improvement and maintenance work on Railway bridges and culverts continued.

Rural Self-Help: Twenty-two schemes estimated to cost \$41,842.40 and involving Government grants totalling \$18,153.71 were approved during the quarter.

Amerindian Development: During the quarter a windmill was erected at Anna Regina and a well... completed at Aishalton. The Rest shelters at Supenaam and Anna Regina were 90% and 50% completed respectively.

I. AGRICULTURE

1. STAFF TRAINING:

The eight students on the 1958/60 course at the Eastern Caribbean Farm Institute completed the course successfully and were all awarded diplomas. Two of them

2. STATIONS:

2. Central Agricultural Station - The roadway from the Stock Farm to the Dairy Expansion Scheme which adjoins the Conservancy was partly surfaced with granite and burnt earth. In wet weather the dam is impassible to vehicles and great inconvenience is experienced in taking feed, drugs etc. to the animals. Over 400 head of cattle are kept at the Scheme.

During the planting season an urgently needed Ferguson tractor was purchased locally. Orders were placed with the Crown Agents for one Crawler Tractor, two Ferguson tractors (No. 35), a Forage Harvester, a Buck Rake, a Fertiliser Distributor and a Side Delivery Rake. Work on the installation of electricity supply for the Stock Farm commenced.

3. Hosororo Experiment Station -

Cocoa: Clearing of the 26 $\frac{1}{2}$ acres of forest land felled last year was completed. Strips were cleared three feet in width across the field with a distance of 12 feet between the strips. Danarm Chain Saws were used to cut out the logs lying across the rows. Lining was done, holes dug along the rows and cocoa planted under the shade of the growth that grew from the banks of the wood and stumps etc. At the end of the quarter an acre of each of the following clones had been planted Nos. 1, 40, 60, 84, 95 and an acre of I.C.S. No. 32 was being planted. Plant holes were prepared with farm yard manure. The five acre plot which was planted in 1959 under planted shade was manured and all dead plants replaced. Some of the bitter cassava, planted as shade, was harvested and sold. The four acre plot planted in 1958 under natural shade was fertilised and all dead plants replaced.

Coffee: The 8 acres of swamp forest, felled and burnt during the last quarter, were surrounded with trenches and dams and a koker was installed and the whole area planted with corn. Coffee will be sown after the corn is harvested. At the end of the quarter about 1 $\frac{1}{2}$ acres of yams were being planted among the corn. Liberica coffee seed was planted in the nursery to be ready for planting in this area.

Citrus: The ten acres of Valencia oranges planted in 1959 were fertilised together with the five acres planted in 1958. The fields were stumped and logs left from after the burning were piled in rows among the citrus. All dead plants were replaced. Kudzu seed was sown as a cover crop in part of the 10-acre field and Bengal Beans in another section. The five-acre field was weeded and locunta grass planted as cover crop. Mealy bugs and scale insects were sprayed with Malathion. The nursery was extended.

Pineapples: The plants were fertilised.

Livestock: Three calves, of which two were bulls, and three piglets from the distribution unit were sold and distributed respectively to farmers.

Buildings: Construction of the three houses for staff continued.

Fencing: A start was made on the fencing of the locuntu on the swamp.

Equipment: A danarm chain saw model MKIIR 8F four foot blade was purchased to assist in clearing land.

Roads: The road to the swamp was completed and a new road to the new cocoa and coffee areas cleared. Steep sections of the road were surfaced with colas.

4. Livestock Station - Ebini - During the quarter much work was done on the renovation and subdividing of the older pastures and the planting of shade trees, the latter easily damaged by stock. A further trial with alfalfa was started.

Experiments and Investigations: Further liver biopsies were taken from stock of varying ages as part of the liver cirrhosis investigations. A preliminary mineral deficiency experiment was concluded. This emphasised the need for phosphates and cobalt and suggested complete interactions between other elements viz. copper, sulphur, zinc, molybdenum. The collection of routine information e.g. weights, calving etc. continued.

Livestock: The calf crop was heavy and losses few. All young stock grew exceptionally well. Thirty steers recently shipped to Georgetown Meat Marketing Limited were of good quality. One steer twenty three months old giving a carcass weight of 510 lbs. was outstanding.

5. Livestock Station - St. Ignatius -

Grass: The Agronomist continued to receive planting material of various grasses for trial in the area including Panicum coloratum var, Makarikariensis and "wild cane". Pangola (D. decumbrens) was planted extensively on three sites - 1½ acres of river alluvium on the banks of the Takatu, 15 acres of sandy grey loam of the Kumu series at the Central Corral and 17 acres of clay loam of the Lethem soil series at the outstation at Jawari. The grass along the river bank is well established but poor at the other two sites and will be replanted. No other grass has so far been planted extensively. It is however planned to extend the area under Jaragua (H.rufa) principally for seed.

Other Crops: A three acre bush field was sown with corn. This field included two replicated experiments on the fertilising and other cultural aspects of corn growing in the Rupununi.

Livestock: During the quarter 48 calves, of which 23 were females, were born. Six animals were sold for meat and seven died leaving at the end of the quarter a herd of 547. At the beginning of the quarter the cattle showed rapid improvement but heavy rain towards the end of the quarter caused

a falling off of condition of the animals. Insects severely affected new born calves. Since the rains began there were many cases of animals being bitten by bats. One horse died and a mule foal was sold.

At the end of the May there was a break in the power supply cable and the Station has since been without electricity. Trouble was being experienced with the domestic water supply for the senior officers quarters. At the end of the quarter there were eighteen males employed full time including two boys under training as assistants to the Veterinary Officer and the Agronomist, in addition to casual labour for field work.

3. SOIL SURVEYS:

6. Tapakuma - Field work on this survey continued at a restricted pace because there was only one surveyor. The shortage of staff in addition to unsuitable weather conditions has been responsible for unforeseen delay, hence the soil report might not be ready before the end of October.

7. Tappa - The outlook on this survey was modified and it was decided to concentrate on about four square miles in the area for a detailed survey before establishing a land development scheme. The exact location of the settlement has not yet been decided.

4. CROPS:

8. Cocoa Development - Maintenance and propagation work was carried out on all stations. The experimental clearing of 26½ acres of forest land at Hosororo was completed. Holes were dug along the roads and planting was being done under the shade of the secondary growth resulting from the felling. One acre each of the varieties I.C.S. 1, 40, 60, 84, 95 and 32 were planted. Two acres of yams, tannias, and bitter cassava planted at the nursery plot as catch crops and temporary shade were reaped. As a result of cushion gall infection at the Providence Station 650 trees were cut down, stumped and burnt. Propagation was discontinued and the buildings were removed to Mara, some twenty miles further up the Berbice River. At Atkinson Field 76 plants were also destroyed because of this disease. The hardening floor at Atkinson Field was increased by 3,384 square feet and plans were being made to increase the area at Hosororo.

The demand for plants showed a great increase. For the quarter 29,400 cuttings were propagated and 9,274 plants basketed, 8,618 plants were distributed and 8,858 were available for distribution. Two boxes containing 8,660 hybrid seeds were imported from Trinidad. At Hosororo 149 lbs. of cured beans were produced and at Atkinson Field 1,615 lbs. of wet beans were harvested.

9. Coconut Development

Selection and Propagation: The collection of nuts for propagation in the nurseries at the Central Agricultural Station was continued from selected blocks situated at Chapman's Grove, Spring Hall, Hope and Cane Grove Estates. The records of yields and general performance of selected trees were also

continued. For the quarter ended June 1960, 67,222 nuts were sown in the nurseries as compared with 133,370 for the quarter ended March. Between December, 1959 and June, 1960, 285,756 nuts were sown in nurseries at the Station. The selection of good planting material does not cease with the selection of good nuts. The selection of seedlings continued in the nursery and as a general rule nuts which germinate seven months or more after having been put into the ground are discarded.

Distribution of Seedlings: During the quarter 41,044 seedlings were distributed as shown in the table below. 73,788 seedlings were distributed for the first half year as compared with 3,226 seedlings for the same period in 1959.

Month	<u>DISTRICTS</u>					<u>TOTAL</u>
	<u>Essequibo</u>	<u>West Demerara</u>	<u>East Demerara</u>	<u>Berbice</u>	<u>Miscellaneous</u>	
April	1,100	100		2,962	9	4,171
May	4,000		4,087	6,900	38	15,025
June	10,000		8,596	3,200	52	21,848
<u>Total</u>	<u>15,100</u>	<u>100</u>	<u>12,683</u>	<u>13,062</u>	<u>99</u>	<u>41,044</u>
Quarter ended 31st March	6,400	62	11,977	14,150	155	32,744
<u>Total to end June</u>	<u>21,500</u>	<u>162</u>	<u>24,660</u>	<u>27,212</u>	<u>254</u>	<u>73,788</u>

Great difficulty is experienced in the transportation of seedlings. Extreme care is taken in packing the seedlings in trucks, but due to the poor condition of the roads seedlings suffer considerable damage during transport, particularly to Berbice. Arrangements are being made for the establishment of nurseries in Berbice and Essequibo in order to avoid the difficulties of transportation. Shipments to Essequibo were somewhat slow since the ferry steamer can only accommodate 1,000 seedlings at a time and twice per week. In order to expedite transportation two sloops were hired. The average price of a selected nut purchased is seven cents and the selling price of a seedling five cents.

5. FISHERIES:

At Onverwagt all main works were completed and ten ponds totalling some 57 acres were in operation. Continuous and complete records of all data at the Station were maintained.

The total rainfall to May 31st was 16.41" and the average level of water in the ponds was 54.58 G.D. resulting in an average depth of 3'2" of water over the land and 6' over the excavated portion. Thousands of fish and shrimp fry were introduced through the intake kokcr as determined by random catches at the high tide, the predominant fish being croakers. 5,346 fish were introduced to the ponds of which 103 specimens between 9 - 15 cms. in length were fin-clipped for growth rate studies. Biological observations were made on 28 fishes and efforts to identify the various species of shrimp found were partly successful. The species identified were *Penaeus schmitti* and *P. aztecus*.

A workman's house was completed during the quarter. The establishment of a check sluice in the intake canal to divert water of the low tides into ponds A and B was nearing completion. Much difficulty is being encountered with the drainage from the koker to the sea owing to the silting up of the channel, as a result there is less time available for intake of fish or drainage of the ponds than was planned. However it is hoped that this will soon be remedied. Silting of up to three feet in this channel has occurred within a year. Three sides of the Station were fenced and fencing of the fourth was nearing completion.

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II. CIVIL AVIATION

Georgetown Airport - The report of the International Co-operation Administration was received.

Improvement of Interior Communications - Work on completing the Kamarang Airstrip which became operative during the preceding quarter proceeded satisfactorily. The strip will be 4,000' x 150'.

Aeronautical Communications and Navigational Aids - Some of the equipment to replace that at Atkinson Field destroyed by fire was received.

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III. DRAINAGE AND IRRIGATION

1. BLACK BUSH POLDER:

Progress of Work - Good progress was maintained despite adverse weather conditions. Road works were affected most. Permanent work was about 80% completed. A self-propelled rotary mixer with spray bar and cement spreader and a self-propelled kneading and compacting unit were received. Routine supplies of cement, stone, sand, and timber were also received.

Main Sluices - All three sluices were operated and satisfactory drainage was effected. Various minor modifications to the lifting mechanisms were completed at Lesbeholden and were in hand at Mibikuri and Joppa.

Mibikuri, Joanna and Yakusari - Satisfactory progress was maintained on the construction of tailwalls, water-course regulators and road bridges.

Head Regulators - The Joanna/Yakusari and Yakusari regulators were completed except for the fixing of lifting ropes. Concreting was completed at Mibikuri/Joanna and the bridge was well advanced. The fixing of guide strips was in progress.

Main & Branch Canals - Reshaping of badly placed lengths was completed during the quarter.

Pumping Station - Completed.

Inter-settlement Road - Stabilisation of the lower base was started and about one mile was completed. Due to adverse weather conditions a stop was put to hauling, spreading and compacting of the lower layers of the pavement.

2. BOERASIRIE EXTENSION PROJECT:

Headworks

Earthworks: The raising of low spots on the Main Crown Dam up to Leonora corner was completed by the Clamshell barge which was then used on similar work on the Main Crown Dam of the Canals Polder. The seepage drain alongside Naamryck Relief Canal was almost completed.

Structures: All in good order.

Distributaries

Earthworks: Work on the Ruby/Boerasirie Distributory continued and at the end of the quarter excavation to the Vergenoegen Intake was completed. Only 25% of the work remained to be done.

Structures: All in good order. Three small intakes to Freehold lands on the East Bank Essequibo were constructed and the intakes at Barnwell and Greenwich Park were in the course of completion.

Drains

Earthworks: De-silting operations were completed on the Parika/Look-out and Parika/Hydrantie facades and similar work started on the Demerara facades. These operations suspended the closing of tidal outlets in the West Bank Demerara.

Structures: The construction of greenheart boxes across berms in the facade drains on the East Bank Essequibo was substantially completed.

3. TAPAKUMA PROJECT:

Surveys: Plotting of outstanding cross sections of the Somerset/Berks canal and location and plotting of properties affected by the top water level of the new reservoir were completed.

Hydrology: Routine river discharge measurements continued and water table levels and other hydrological data were recorded.

4. MINOR DRAINAGE AND IRRIGATION WORKS:

East Demerara

Park Sluice: Earthworks were completed. Minor pal-offs will be constructed in event of slips.

Mahaicony/Abary: Reconditioning work on the Mahaicony facade and the Burma Drain and the grading of dams were completed.

West Demerara

Windsor Forest/La Jalousie: Adverse weather conditions prevented the operations of the first panel north of the Windsor Forest/La Jalouse cross dam trench in a trial aimed at diverting irrigation water from La Jalousie intake to Windsor Forest and the other estates now being served by the Windsor Forest intake only.

Den Amstel: Clearing was completed of the Fellowship side line trench and dam and also the digging of the Den Amstel east side line from the last cross dam to the public road - approximately 1,460 rods. Approximately 1,300 rods of the Fellowship side line was dug and digging was in progress of some 100 rods from the last cross dam northwards for the completion of the Fellowship Middle Walk. Work was also in progress from the last cross dam to the Conservancy head on the east side line.

Reconditioning Drainage - North Pouteroyen: During the quarter work was completed on the intake koker.

La Retraite: Satisfactory progress was made on the cleaning of the facade drain behind the house lots and the northern side line trench and dams and the digging of the facade drain behind the house lots.

Berbice

Rosehall: The foot bridge was completed and clearing of light bush and grading by tractor in progress. Work progressed slowly due to the high percentage of sand in the soil and the shortage of draglines.

Gibraltar Sea Sluice: The empoldering of sluice by adjoining sea dams was completed.

Lancaster/Manchester: Construction of two bridges, three checks and digging of the entire facade and irrigation trenches were completed. Approximately 10% of the work remained to be done.

Fyrish: Reconditioning of trenches was in progress and approximately 45% of excavation was completed.

5. TOPOGRAPHIC SURVEYS:

Mahaica/Berbice - The backlands survey was completed and four parties were engaged on the engineering survey of the frontlands.

Canje River - During the quarter three survey parties were sent into the field.

6. HYDROGRAPHIC AND HYDROLOGICAL SURVEYS:

The stage and rainfall recorders continued to be operated and maintained in the Mahaica, Mahaincony, Abary and Canje Rivers and the gauging station at Manarabisi (Canje) was re-activated. An automatic stage recorder was erected at Paradise, Berbice River and discharge measurements were taken. Flow discharge measurements continued to be taken in the upper regions of the Mahaicony and Mahaica Rivers.

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IV. EDUCATION

1. PRIMARY SCHOOLS - BUILDINGS:

Essequibo - Construction of the school at Good Hope was 75% completed.

Demerara - Extension of Enmore Government School was completed. Construction of the schools at Craig was 90% complete. The foundation for the School at Lodge was cast.

Berbice - Foundation, roof and framing work on the Fyrish Congregational School was completed and cladding and flooring in progress. Framing and cladding were in progress at Fort Ordance and plumbing and painting at St. Patrick's, East Canje. The schools being built at Resource and Commons No. 2 Canal were 75% completed.

2. POST PRIMARY SCHOOLS:

Drawings were being prepared for the Post Primary School to be erected at Anna Regina.

3. DOMESTIC SCIENCE AND HANDICRAFT CENTRES:

Work was started at Arthurville. Tenders were about to be called for erection of 7 other centres.

4. PRIMARY SCHOOL SANITATION:

Work on the Diamond Government School was 90% completed.

V. INDUSTRY & CREDITS (FINANCE)

Credit Corporation - Loans made and repayments received by the Credit Corporation during the quarter were as follows:-

	LOANS		REPAYMENTS
	No.	Amount(\$)	Amount(\$)
AGRICULTURE	28	139,740	105,067
HOUSING-PUBLIC OFFICERS	22	105,406	130,941
-OTHERS	126	144,855	207,721
INDUSTRY	6	21,435	52,430
FISHING	-	610	5,205
LOGGING	-	-	-
FOOD PRODUCTION	55	292,534	99,401
LOCAL AUTHORITY	-	-	1,482
	237	704,580	602,247

At the end of the quarter Sundry Disbursements totalled \$15,329 with repayments of \$8,563.

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VI. GEOLOGICAL SURVEYS

Buildings - The new laboratory was occupied during the quarter. Construction of the other buildings required under the building programme should commence soon. The most important of these being a rockstore and a vehicle workshop.

Field Surveys - All field expeditions returned to Georgetown in May. Work on the bauxite of the Pakaraima Mountains was continued and it was established that the deposits extend from upper Potaro westwards in the upper Kamarang valley. A very large number of samples was collected and these await analysis. A senior Geologist, a geologist and two assistant geologists were engaged on this work. Such results as have come to hand indicate that the silicia and titanium content are low and iron high, but it is considered that the ore could be beneficiated to produce a medium grade ore and a yield of about 50% by washing. Very useful results were obtained from the team who worked in the North West District and it is now possible to subdivide the formations there into convenient mappable units. This will be valuable in carrying out detailed mapping of the formations with which manganese deposits are associated. Progress was also made in mapping the hitherto unmapped areas in the Puruni River basin and in remapping the country between Peter's Mine and Aremu Mine. It is likely that many fundamental problems of the age

/relations

relations of the geological formations in this area are nearing solution. In the central part of the Colony the Muruwa formation was traced by discontinuous outcrops from the Essequeibo River eastwards to the Corentyne.

The results of the aerial geophysical survey of the Mazaruni area carried out in January by Messrs. Aero Service Corporation of the United States of America were received. A very strong magnetic anomaly in the Itaki Hills will require investigation.

Laboratory Work - The work carried out during the quarter included:-

Heavy mineral separations and sieve analyses	....	....	9
Chemical analyses	....	....	200 (approx.)
Thin sections	....		295
Analyses for private parties			1

Drawing Office - The new dark room was taken over and a new map printing machine installed. The following were done during the quarter:-

Ammonia sunprints	....	....	431
Maps and tracings	....	....	39
Photoscopic stencils	....	....	7

The maps drawn included a 1/1,000,000 reduction of the 1/500,000 geological map of British Guiana. Maps drawn for exhibition at the International Geological Congress in The Hague included a mineral (1/500,000) and two provisional (1/500,000 and 1/1,000,000) geological maps of British Guiana.

Library - During the quarter 6,968 books were catalogued, 139 new accessions made and 430 books were loaned to officers. The number of publications cyclostyled and distributed by sale or free exchange was:-

Bulletins	....	....	293
Annual Reports	....	....	38
Mineral Resources Pamphlets	....		259
Maps	....	....	27
Other Reports	....	....	91

Work on compiling a bibliography of geological and mining literature on British Guiana continued. At the end of the quarter 469 references, of which 268 have been published, were on record. The compilation of an index of mineral localities was started.

VII. HEALTH

1. HOSPITALS:

During the quarter work on plans for the Suddie Hospital Extension and Lethem Hospital continued. The Cottage Hospital at Mahaicony was 98% completed and at both Leonora and Leguan construction was 90% completed.

2. HEALTH CENTRES:

At the end of the quarter the position regarding construction was as follows:-

Essequibo

Windsor Castle	...	50% completed.
Queenstown		85% completed.
Huis T'Dieren	...	95% completed.

West Demerara

Windsor Forest	...	Completed.
Vergenoegen	...	Completed.
La Grange	...	Plans completed.

East Demerara

Plaisance	...	Plans being prepared.
Handsome Tree, Mahaica River	...	50% completed.
Clonbrook	...	69% completed.

Berbice

Crabwood Creek No. 63 Bush Lot) Bohemia) Fyrish) Reliance)	...	80% completed.
Cotton Tree	...	Site not yet available.

Contract was awarded for the building for Nos. 47
48 Corentyne.

IX. LANDS AND MINES

Topographic Surveys - Surveyors of the Cartographic Section in collaboration with the U.S. Army Unit carried out a tellurometer survey from Atkinson Field to Orealla on the Corentyne River.

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X. LAND DEVELOPMENT

1. EXISTING LAND DEVELOPMENT SCHEMES:

Essequibo - 117 rods of the Lima North Drainage trench on the third depth were dug and 5 acres of land at Reliance "E" were cleared of bush in preparation for rice cultivation. In the Cotton Field Anna Regina area low spots were filled and levelled in Sections "A" and "B", interlot drains dug in Section "B" South Housing area, 55 square rods of street metalled and a dam was built across the drainage trench to provide access to the Housing area in Section "A". Two greenheart boxes were constructed for the Anna Regina Section "B" South Housing area and one for the Cotton Field Housing area. At Reliance two similar boxes were installed to drain the housing area. Twenty-seven trestles were made for the new market shed at Charity. The earth floor of the Farmers' Shed was built up against flooding and a new wing added to the southern side.

Vergenoegen - Sixty-five acres of bush were cleared in the Barnwell Savannah pastures.

Cane Grove - Approximately 44 acres of land in the north were cleared. The filling of a centre irrigation canal was completed.

GARDEN OF EDEN:

The south middle walk dam was built up and levelled. Outlets were dug to drain the second cross dam and two greenheart bridges (foot type) were built across the north and south middle walk dams. The approaches at both ends of each bridge and also that of the main concrete bridge were made up. 65 acres of land were cleared by farmers.

MARA CUM ANNEXIS:

Work continued on the survey and layout of the cocoa area. Metalling of roadways proceeded slowly due to heavy rainfall. Some greenheart boxes were put down while others were under construction.

4. BLACK BUSH POLDER-LESBEHOLDEN:

One hundred and six rice plots were cleared of six hundred and sixteen acres of bush. 159 settlers have been allocated holdings of approximately 17 acres each and some have started to erect homesteads. The erection of Office and Quarters for Staff proceeded and at the end of the quarter a prefabricated house and a building to be used as storeroom and office were completed.

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XI. POST OFFICE

Unit Automatic Exchange - The Exchange Building at Skeldon was completed during the quarter. Only the fitting of doors and windows remained to be done on the Power Houses at Anna Regina and Mahaicony.

Rural Automatic Exchange Equipment - A 50 line Unit Automatic Exchange was installed at Anna Regina.

Radio Buildings - The building at Mon Repos was completed. The erection of the Radio Tower at Vreed-en-Hoop was completed.

Underground Duct and Cable System - Work on the 54 pair trunk cable from Georgetown to Mon Repos and the special six pair screened cable for Radio Demerara's music circuit were completed during the quarter. Work was started at Anna Regina on the sub-distribution system in the village.

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XII. PUBLIC WORKS

1. ROADS:

Parika/Bartica - The reconnaissance survey continued and at the end of the quarter the remaining $4\frac{3}{4}$ miles of the $7\frac{3}{4}$ miles from Makouria to Urisima Point was completed. Design of approximately four miles from Bonasika to Larimacabra was completed.

Bartica/Potaro - The road was completed from 8 to 9 miles and stabilised with stone in sections and culverts were laid in these sections. During the quarter clearing and

grubbing were started from 10 Miles and at the end of the quarter work was in progress at 12 $\frac{1}{2}$ Miles. The formation work progressed steadily and had reached 10 $\frac{3}{4}$ Miles. A distance of some 3,800 feet was cleared and formation work completed from station 71 to 12 Miles. Sealing work has not yet commenced.

Potaro/Lethem - A distance of some 12 miles of reconnaissance survey was made. Only 4 $\frac{1}{4}$ miles of the 11 miles of preliminary location line completed during the last quarter were accepted. The remaining portion was abandoned due to flood conditions. An additional 9 miles location was done between Bononi and Bamboo of which 4 $\frac{1}{2}$ miles were accepted. In the Annai/Burro-Burro area a distance of 7 $\frac{1}{2}$ miles was completed between stations 6020 + 00 and 5655 + 00.

East Bank - The main structure of the Diamond Bridge was completed and some 5,670 tons of sand/clay were compacted at the approaches. At the end of the quarter the approaches were 90% completed. Four concrete culverts were constructed at Coverden and erection of a sluice gate on the culvert at Friendship was started. During the quarter work on the Coverden deviation base course was completed.

2. SEA AND RIVER DEFENCES:

Essequibo

Walls, Essequibo Coast	...	Toe piling was being driven. Progress was slow due to shortage of boulder stone.
Walls, Leguan	...	164' completed at Amsterdam.
Works, McNabb/Somerset and Berks	...	3,500' earth dam thrown up. Adverse weather conditions held up work on earth dam and an inadequate supply of materials delayed the construction of 900' R.C. coping.

West Demerara

Casing Uitvlugt Wall	...	337' encased. Work completed.
Groynes	...	550' completed.

East Demerara

Groynes	...	150' completed.
Works, Nabaclis/Annadale	..	Works completed were:- Boulder wall

R.C. coping	..	496'
Toe Piling	..	975'
Earth Dam	..	4,379'
Groynes	..	150'
Grass planting	..	5,225'

Berbice

Works Fyrish/No.32 ... Survey in progress.

Re-casing concrete walls
(Colony wide) ... 41' completed at Stanleytown,
West Bank Demerara.

3. P.W.D. - BUILDINGS ETC.

The extension of the workshop was 95% completed.

4. HOUSING FOR PUBLIC OFFICERS:

At the end of the quarter the construction of the houses at Mahaicony for the Social Assistance Officer and the Agricultural Instructor were 60% and 30% completed respectively. 90% of the fencing of the block of flats in New Market Street and 40% of the painting of the Barracks at Eve Leary recently converted into married quarters were completed. A contract for construction of the Headteacher's house in Wakenaam was entered into. Tenders were invited for construction of 6 houses in Berbice and 1 in Demerara.

PUBLIC BUILDINGS:

At the end of the quarter the Office for the Overseer and Foreman and the storeroom at Anna Regina and the garage and stores at the District Commissioner's Office, Vreed-en-Hoop were 95% and 90% completed respectively. Drawings were completed for the Police Station at Annai and were being prepared for the Magistrate Court at Sisters and the Administrative Building and New Fire Station in New Amsterdam.

6. RURAL WATER SUPPLY (ARTESIAN WELLS):

Work uncompleted at the end of 1959 - The laying of pipe line was completed in the Plaisance/Sparendam area. The drilling of the well at the Shelter Belt continued.

New Works -

Essequibo: Work on the construction of an overhead tank and windmill at Aurora was completed and work was in progress on one at Hyde Park and a sump at Queenstown. At Jacklow, Pomeroon River, a hole was drilled to 278'. The laying of pipe line was completed at Danielstown, Queenstown and in the Aurora/Makeshift area and in progress at Charity, Hyde Park and Better Success.

Demerara: Work on the construction of an overhead tank at La Grange, West Bank, was nearing completion. The laying of pipe line was completed at Mahaica, Chelsea Park and DeKinderen, East Coast and in progress in the Belfield/Victoria area.

Berbice: The laying of pipe line was completed at Sandvoort and in the Sisters, Roterdaam and Kortberaad districts.

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XIII. TRANSPORT AND HARBOURS

Steamer Services - The demolition of the buildings at the Georgetown Ferry terminal was completed. Pile driving and other equipment were put on site and all preparatory work completed including the installation of water service lines and electric power lines for operation of the steam hammers and electric saws. The reconstruction and extension of the Vreed-en-Hoop Ferry Terminal and Goods Depot continued. At the end of the quarter 149 greenheart piles had been driven and a number of half caps fitted. Floor joists made of hewn lumber were being prepared and bolted to caps. The installation of the new engine for the m.v. "Barima" continued.

Reconstruction and Extension of Stelling - At Morawhanna the roof of the stelling was being extended and guttering fitted. Cladding was being fitted to the windward side of the shed forming an enclosure for the protection of passengers and perishable traffic. Improvements will also be carried out to the stelling's approach.

Minor Works - At Adventure the building to house the 3 K.W. Diesel Electric Plant was completed and all electrical installations were carried out. Sanitary amenities were being installed at Stanleytown. At the Goods Wharf Georgetown work was in progress on the installation of sanitary amenities, fire fighting water mains, industrial water service lines and the reclamation of lands subjected to tidal floodings which will be used by the Department. Installation of fire fighting equipment which includes a Covertry Climax 500 glns. per minute portable pump and several hoses, branch pipes and nozzles was also being undertaken at both Stanleytown and at the Goods Wharf Georgetown.

Harbour Services - The delivery of the two 16 K.W. Diesel Electric Plants was still awaited. These units will operate on a 24-hour basis serving the Launch Station, Railway Station, Locomotive Shed and the Ferry Terminal. Seven single pile lighted Beacons were erected in the approaches to the Waini Bar and Mora Passage to serve as markers for sea-borne ships approaching Waini Bar from any direction.

/Railway

Railway Services - Protective sheet piling work to prevent erosion at the abutments and northern side of the railway embankment at Bridge No. 104, East Coast Railway was completed. Shed girders were strengthened and painted on the Bridges and Culverts at Nos. 81, 83, 85, 87, 88 and 94 on the East Coast Railway and work on No. 96 was in progress. Preparations were in hand and materials and equipment on site for the reconstruction of the western abutment and temporary bridge at No. 104 on the West Coast Railway. Work was in progress at Fort Wellington.

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XIV. MISCELLANEOUS

Government Recording Studio - Georgetown - 65%
completed.

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XV. RURAL SELF-HELP

Grants totalling \$18,153.71 for 22 schemes estimated to cost \$41,842.40 and to benefit some 1,864 families were approved during the quarter. Ten of these schemes were for Berbice, four for Demerara, five for Essequibo and three for the Rupununi. These consisted of buildings (2), fencing etc. (6), metalling roads (3), digging of trench for drainage (1), bridges (7) and miscellaneous (3). In addition six schemes were revised - four in West Demerara of which two were for building, one for metalling foot path and the other for the construction of a koker; one in East Demerara to fence a burial ground and the other in East Berbice to erect a pig sty and fence a paddock.

XVIII. AMERINDIAN DEVELOPMENT

Communications - Lighting plants and radio equipment were ordered for Karasabai and Aishalton.

Water Supply - At Aishalton a well was completed and a windmill erected. At Annai a windmill was erected and the construction of a well in progress.

Training Centres - A course in carpentry was in progress at Aishalton and one in dressmaking at Orealla.

Kumaka-Kwebana Land Settlement - Work on the road was started.

Rest Shelters - The buildings at Anna Regina and Supenaam were 50% and 90% completed respectively.

APPENDIX

Development Programme - Financial Statement.

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Head of Estimate and Project	Total Provision for 1960	Total Expenditure for 1960 (to end of June).	Expenditure April-June.
	\$	\$	\$
I. <u>AGRICULTURE:</u>			
Cocoa Development ...	160,000	27,958	19,810
St. Ignatius Livestock Station ...	104,580	23,222	15,409
Ebini Livestock Station	108,000	31,280	17,595
Staff Training ...	50,500	2,254	2,004
Soil Surveys ...	109,000	40,705	21,849
Rice Development ...	80,000	-	-
Coconut Industry (Including Coir Manufacture)	49,600	22,532	8,985
Dairy Industry ...	20,000	-	-
Beef Industry ...	80,000	32,750	32,750
Fisheries ...	58,875	22,461	21,204
Training Centre-Mon Repos	80,000	-	-
Additional Staff ...	41,500	-	-
Bonuses to Producers	94,500	2,900	2,900
Central Agricultural Station ...	351,700	969	596
Hosororo Experiment Station ...	78,920	10,126	7,227
	1,467,175	217,157	150,329
II. <u>CIVIL AVIATION:</u>			
Georgetown Airport ...	452,500	-	-
Improvement of Interior Communications ...	52,500	3,473	3,473
Purchase of Aircraft	50,000	-	-
Aeronautical Telecommunications and Navigational Aids ...	28,000	-	-
	583,000	3,473	3,473
III. <u>DRAINAGE & IRRIGATION:</u>			
Black Bush Polder ...	4,526,000	1,989,390	1,382,365
Boerasirie Project-Main Works ...	283,782	170,161	142,638
Boerasirie Project-Subsidiary Works ..	260,500	-	-
Tapakuma ...	1,000,000	56,562	36,793
Miscellaneous Works & Equipment ...	1,046,000	111,837	73,894
Detailed Topographic Surveys ...	232,600	61,090	44,086

/Hydrological

APPENDIX (CONTD.)

Head of Estimate and Project	Total Provision for 1960	Total Expenditure for 1960 (to end of June).	Expenditure April-June.
	\$	\$	\$
III. DRAINAGE & IRRIGATION (CTD.)			
Hydrological Surveys	177,500	36,594	24,957
Land of Canaan Relief	180,000	-	-
Drainage & Irrigation Works-Golden Grove/Clonbrook ...	20,000	-	-
Torani Irrigation Canal & Block III ...	170,000	115,093	60,111
Wages Increases ...	-	4,636	146
	7,896,382	2,545,363	1,764,990
IV. EDUCATION:			
Primary Schools-Buildings	616,600	89,708	56,570
-Furniture & Equipment	100,000	2,567	2,064
Post Primary Schools	120,000	-	-
Domestic Science & Handicraft Centres	137,000	2,262	2,262
Capital Grants to Secondary Schools ...	80,000	-	-
Extensions & Improvements to Queen's College	32,400	500	500
	1,086,000	95,037	61,396
V. INDUSTRY & CREDITS:			
Agriculture & Housing Loans ...	500,000	-	-
Industrial ...	1,000,000	-	-
	1,500,000	-	-
VI. GEOLOGICAL SURVEYS:			
Geological Surveys ..	575,474	255,265	153,752
Inter Guiana Conference	680	562	562
	576,154	255,827	154,314

/ :VII.

APPENDIX (CONTD.)

Head of Estimate and Project	Total Provision for 1960 \$	Total Expenditure for 1960 (to end of June) \$	Expenditure April-June. \$
VII. <u>HEALTH:</u>			
Suddie Hospital ...	50,000	-	-
Lethem Hospital ...	15,000	-	-
Health Centres ...	30,000	54,947	25,381
Environmental Sanitation Programme ...	29,000	-	-
Malaria Eradication	20,000	-	-
Filaria Eradication	21,000	6,398	6,318
Poliomyelitis Vaccination	61,300	6,482	1,190
Anti-typhoid Vaccine Trials	80,000	14,725	8,276
Purchase of Hospital Equipment ...	44,600	-	-
Settlement of Ex-patients-Mahaica Hospital ..	7,991	-	-
Cottage Hospital Leonora	39,081	7,043	7,043
Cottage Hospital Leguan	37,820	13,262	3,543
Cottage Hospital Mahaicony	49,045	17,019	-
Mortuaries ...	7,265	2,353	519
	492,102	122,229	52,270
VIII. <u>HOUSING:</u>			
Rural and Urban Housing	1,239,711	185,982	85,184
IX. <u>LANDS & MINES:</u>			
Topographic Surveys and Training of Surveyors	40,000	3,814	3,248
Aerial Photography ..	120,000	66,810	-
	160,000	70,624	3,248
X. <u>LAND DEVELOPMENT:</u>			
Development of Pln.Mara Black Bush Polder-Lesbeholden ...	735,000	49,937	39,783
Existing Land Development Schemes ...	475,000	16,585	16,585
Machinery and Equipment	150,443	15,168	8,500
Preliminary Investigations	108,750	-	-
Garden of Eden ...	7,000	7	-
West Bank Demerara -	71,930	14,319	9,933
Chantilly/Bourda ..	212,500	-	-
	1,760,623	96,016	74,801

APPENDIX (CONTD.)

Head of Estimate and Project	Total Provision for 1960	Total Expenditure for 1960 (to end of June).	Expenditure April-June.
	\$	\$	\$
XI. <u>POST OFFICE:</u>			
Postal Services ...	50,000	-	-
Telecommunications Rehabilitation ...	600,000	492,232	378,287
	650,000	492,232	378,287
XII. <u>PUBLIC WORKS:</u>			
Parika-Bartica Road	360,000	9,825	6,421
Bartica-Potaro Road	540,000	108,338	71,315
Potaro-Lethem Road	300,000	54,991	42,556
East Bank Road ...	800,000	198,650	90,539
Sea and River Defences	1,705,400	829,249	370,724
Water Supply ...	480,000	169,050	105,671
Public Officers' Housing	262,500	24,667	19,067
Public Buildings ...	200,000	6,129	3,329
P.W.D.-Buildings, Wharf, Fencing ...	150,000	22,001	21,749
Quarries and Craft Section	280,000	-	-
East Coast Road ...	250,000	5,314	2,314
Harbour & Siltation Investigation ...	248,870	38,684	35,684
	5,576,770	1,466,898	769,369
XIII. <u>TRANSPORT & HARBOURS:</u>			
Rehabilitation of Steamer Services ...	1,862,285	178,846	42,877
Harbour Services ...	66,514	12,270	8,994
Railway Renewals ...	115,288	41,678	23,417
	2,044,087	232,794	75,288
XIV. <u>MISCELLANEOUS:</u>			
New Amsterdam-Improvement of Water Supply	62,132	-	-
Expenses of Issue ...	5,000	-	-
Government Recording Studio ...	53,520	18,726	17,065
Medical Research ...	422	225	-
Purchase of two generating sets ...	17,435	3,840	-
Extensions of Georgetown Pure Water Supply	6,143	6,143	6,143
Cancellation of manufacture of a 2,500 K.W. Diesel Set ...	56,708	16,967	16,967
	201,360	45,901	40,175

APPENDIX (CONTD.)

Head of Estimate and Project	Total Provision for 1960	Total Expenditure for 1960 (to end of June).	Expenditure April-June)
	\$	\$	\$
XV. <u>RURAL SELF-HELP:</u>			
Rural Self-Help Schemes	150,000	13,396	6,826
XVI. <u>SOCIAL WELFARE:</u>			
New Georgetown Prison	100,000	-	-
Community Organisation and Community Centres	20,000	2,036	1,073
Youth Welfare & Sports Development ...	42,800	1,814	1,094
Community Development-Training ...	7,200	-	-
	170,000	3,850	2,167
XVII. <u>LOCAL GOVERNMENT:</u>			
Temporary Specialist Staff ...	120,000	20,581	10,516
XVIII. <u>AMERINDIAN DEVELOPMENT:</u>			
Extension of Good Hope/Karasabai Road ...	19,500	-	-
Kamarang Mouth/Paruima Road ...	9,000	-	-
Improvement to roads - South Savannahs (Rupununi) ...	25,000	-	-
Communications (Radio)	7,000	-	-
Water Supply for Rupununi Villages ...	21,500	269	269
Medical Huts ...	4,000	-	-
Agricultural Development Training Centres ...	18,000	-	-
Miscellaneous Schemes	8,000	2,037	737
Kumaka/Kwebana Land Settlement ...	1,000	-	-
Rest Shelters ...	65,000	43	43
District Office Orealla	10,800	317	10
	20,000	2,377	1,082
	208,800	5,043	2,141
XIX. <u>TOURISM:</u>			
Tourism ...	45,000	548	548

APPENDIX (CONTD.)

Head of Estimate and Project	Total Provision for 1960	Total Expenditure for 1960 (to end of June).	Expenditure April-June.
	\$	\$	\$
XX. <u>FORESTS:</u> Central Timber Manufacturing Plant ... Additional Temporary Staff ...	4,876 7,734 12,610	2,460 7,734 10,194	164 7,734 7,898
XXI. <u>RURAL ELECTRIFICATION:</u> Rural Electricity Schemes	28,076	20,787	20,787
TOTAL: HEADS I - XXI	25,967,850	5,903,932	3,663,947

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