

**Series: AWM95**  
Australian Army commanders' diaries  
[Vietnam]

Royal Australian Electrical and  
Mechanical Engineers units

**Item number: 14/3/14**

**Item: 106 Field Workshop**

Narrative

Annex

[1-31 Dec 1970]

COVERING LETTER

Reference No.....

To: OIC, Military History Section, AHQ.

1. I enclose Commanders Diary (AF C 2118) (Adapted) as indicated at Part 2.

2. Please return receipt below.

(Signature)

Appointment

*J. S. SINCLAIR*

Maj  
OOC Unit or senior staff officer

*16/2/77*

**SECRET**

ORIGINAL  
~~DUPLICATE~~

Strike out where  
not applicable

**COMMANDERS DIARY**

OF

Unit or Formation ..... 106 Fd Wksp RAEME

From ..... 1 Dec 70 ..... To ..... 31 Dec 70

INDEX

Narrative (AF C 2118)

ANNEXES

- \* A Duty officer's log
- \* B Messages connected with log
- C Operation orders and instructions issued
- D Operation orders and instructions received
- \* E Sitreps issued
- F Orders of battle and location reports issued
- G Intelligence reports and summaries issued; appreciations made
- H Administrative orders and instructions issued
- I Administrative orders and instructions received
- J Administrative reports and bulletins; ammunition returns; field strength returns
- \* K Standing orders issued
- L Commander's policy and demi-official letters
- M Action reports (if required)
- N Other papers, eg, maps and diagrams, air photos, reports from sub units
- O Periodical summaries of operations
- Z Top Secret Supplementary Diary

Enclosure Numbers

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† RETAINED  
† Despatched to

\* Only to be included during operations.  
† Cross out whichever is not applicable.

on.....

PART 3

COMMANDERS DIARIES  
INSTRUCTIONS

AIM

1. The aim of a Commanders Diary is to provide data on which to base future improvements in Army training, equipment, organization and administration, and to furnish historians with a record of the activities of units and formations in operational and non-operational periods in peace and in war.

GENERAL

2. Entries are to be made daily on AF C 2118 (Adapted) each entry being initialled by the officer detailed to keep it.

3. Commanders Diaries will conform with the rules for drafting orders given in "Staff Duties (Australia)" Chapter 2, Section 12.

RESPONSIBILITY

During Non-operational Periods

4. A Commanders Diary is to be compiled by commanders of all formations.

During Operational Periods (1)

- 5. A Commanders Diary is to be compiled in duplicate by:
  - a. Commanders of all formations.
  - b. Each branch of the staff at formation headquarters commanded by a brigadier or above.
  - c. Heads of services not below the rank of lieutenant colonel.
  - d. Personal staffs and officers holding special appointments.
  - e. Unit commanders.
  - f. Commanders of a detachment of a unit when so ordered.

COMPILATION

- 6. Both original and duplicate copies are to consist of:
  - a. Cover (AF C 2119) (Adapted).
  - b. Index as printed on cover.
  - c. Narrative (AF C 2118) (Adapted).
  - d. Annexes as shown in the Index.

7. All details of the unit or formation (if a detachment is concerned, the name of the parent unit), period covered and enclosure numbers of the annexes are to be shown on the cover. If there has been a change of command since the last report, the date of assumption by the new commanding officer is to be included.

8. The annexes are to be assembled in the groups shown on the cover. If there are no enclosures for an annex NIL will be entered on the cover. If additional annexes are convenient for a particular headquarters, the date of assumption by the new commanding officer is to be included.

ig for operations form Annex "Z", "TOP SECRET g the document. It is to be prepared and disposed of as

INTENTS

mes as well as map references), establishment, equipment  
nd orders given.  
the day's fighting, including company movements.  
ommander with regard to equipment, tactics, organization

potential importance.  
to officers, men and equipment.  
ipment captured.  
s employed in the time not accounted for. The type of

ss and to save work as much information as possible is to  
ocuments issued and received, routine returns, etc. All  
d and the time of receipt or despatch is to be given.

the annexes, but need not give a precis of any of them.

(continued on back cover)

AWM 95

[14/3/Dec 70]

SECRET

AF C 2118 (Adapted)

57813

COVERING LETTER

57813

OW 84/5  
E Box 47

DISPOSAL

13. **Original Commander's Diary.** This is to be forwarded monthly, unless otherwise ordered, by seventh day of the succeeding month direct to AHQ.

14. **Duplicate Commander's Diary.** This must be clearly marked as a duplicate. It is to be sent separately from the original to AHQ one month after the original has been despatched but not before the former has been acknowledged.

15. When overseas, both copies of diaries are to be sent through the Army Records organization in the overseas theatre but at different times.

16. **TOP SECRET Supplementary Diaries.**

a. The documents referred to in Paragraph 9 together with a list of them made out on AF C 2118 (Adapted) must be placed in separate cover (AF C 2119) (Adapted). All details must be filled in and the cover clearly marked in red: "ANNEX Z — OFFICER ONLY". It may be convenient to group the papers by appendices.

b. Supplementary diaries must be forwarded under the normal rules for TOP SECRET correspondence, to AHQ. The inner envelope must be plainly marked:

TOP SECRET  
ANNEX Z to

Commanders Diary of..... (Formation or Unit)

From.....to..... (Dates)

c. The duplicate supplementary diaries must be despatched as shown in Paragraph 14 as soon as receipt of the original has been acknowledged.

COMPILATION

- 6. Both original and duplicate copies are to consist of:
  - a. Cover (AF C 2119) (Adapted).
  - b. Index as printed on cover.
  - c. Narrative (AF C 2118) (Adapted).
  - d. Annexes as shown in the index.

7. All details of the unit or formation (if a detachment is concerned, the name of the parent unit), period covered and exclusive numbers of the annexes are to be shown on the cover. If there has been a change of command since the last report, the date of assumption by the new commander is to be included.

8. The annexes are to be assembled in the groups shown on the cover. If there are no annexes for an annex Nil, will be entered on the cover. If additional annexes are received during the period covered by the report, they are to be included.

9. The cover is to be clearly marked in red for operations form Annex "Z", "TOP SECRET" and the document. It is to be prepared and disposed of as follows:

CONTENTS

10. The contents are to include (as well as map references), establishment, equipment and orders given.

11. The day's fighting, including company movements, and the commander's orders with regard to equipment, troops, etc.

12. Potential casualties, including officers, troops and equipment, and the time of receipt or despatch is to be given.

13. The cover is to be clearly marked in red for operations form Annex "Z", "TOP SECRET" and the document. It is to be prepared and disposed of as follows:

14. The cover is to be clearly marked in red for operations form Annex "Z", "TOP SECRET" and the document. It is to be prepared and disposed of as follows:

1 BP Coy—274/65—55m

AWM 95

[14/3/Dec 70]

This form is to be enclosed with the annexes in AF-C2119 (Adapted).

AUSTRALIAN MILITARY FORCES

AF - C2118 (Adapted)  
Revised Apr. 1969

# COMMANDER'S DIARY NARRATIVE

UNIT/FORMATION 106 Fd Wksp RAEME

MONTH and YEAR Dec 70

REFERENCE MAP 6429 (IV) NE

COMMANDING OFFICER Maj J.S. SINCLAIR

Serial	Place and grid reference	Date	Time	Event or Information	Reference to annex letter and/or enclosure No.
(a)	(b)	(c)	(d)	(e)	(f)
1	1 ATF Base	1-12 Dec	1970	Normal Duties	
2	404647	13 Dec	1700H	5 Man 24 hour ambush patrol.	
3	1 ATF Base	14 Dec	70	Normal duties.	
4	1 ATF Base	15 Dec	70 0800H	Change over of OC's. Incoming Maj J S SINCLAIR, outgoing Maj A A NOLAN	
5	1 ATF Base	16-20 Dec		Normal duties.	
6	422661	21 Dec	70 1700H	11 Man 24 hour ambush patrol	
7	1 ATF Base	22-27 Dec		Normal duties	
8.	1 ATF Base	28 Dec	0015	1797 WO1 R.K. NICHOLS died in unit lines, 1 ATF investigation continuing.	
9	1 ATF Base	29-31 Dec		Normal duties.	

12 Jan 71

R707-1-1

RAEME UNIT MONTHLY REPORT - DEC 70

Reference: A. ART1 GEN D101-1

WORKSHOP CAPACITY

General

1. With the exception of B Vehicles, Instruments and Telecommunications, the workshop was underloaded during December. The backlogs occurring at the end of the month were nearly all due to late arisings with few jobs held up for spare parts. Excepting Telecommunications and Instruments, labour shortage did not cause any carryover.
2. Annex A details the arisings and completions for December 1970 as well as the carryover at the end of that month.
3. An analysis of the loading of 106 Fd Wksp from May 1969 to December 1970 has been carried out based on the information most readily available from workshop records. The analysis, which is attached at Annex B, was undertaken for two main reasons. The first was to provide quantitative information on which to base any reorganization of second line EME support. The second was to determine whether the poor loading for December had any significance.
4. The analysis is not yet complete, having been started too late in the reporting period. The review will be extended across more equipments and should be completed in time for the next report.

LESSONS LEARNT

Trend Statistics

5. The results obtained to date from the load analysis show the need for operational field workshops to maintain trend statistics and hence the value of including a small computer in the workshop entitlement or within the RAEME organization in theatre. Information which can be obtained includes:
  - a. Equipment reliability measurements against particular climatic, terrain and operational situations.
  - b. Quantitative measurements of the affect of equipment modifications and changes in maintenance and repair techniques and procedures.
  - c. Areas where equipment investigations are needed.
  - d. Determination of equipment pool sizes.

12.

- e. Need to vary repair parts scalings.
  - f. Need for workshop equipment and establishment variations.
6. Manual methods are slow and result in groupings for analysis being too broad. The application of statistical significance tests against the data obtained is beyond the capacity of the workshop if manual methods are used.
7. Continuing maintenance of statistics is important with factors external to workshop activities being recorded. This is necessary if trends are to be explained. Where personnel change over every twelve months, the collective memory of the workshop and in fact EME staff in the theatre is limited. To assign reasons to trends without such records is to work in the area of rumour and supposition. Some of the external to workshop factors which must be recorded are:
- a. Broad details of the nature of operations including enemy counter equipment tactics.
  - b. Climatic and terrain conditions.
  - c. Details of equipment usage such as miles or hours run. Such information is of value when applied to equipment type rather than a particular equipment.
  - d. Average age of equipment.
  - e. Date of changes in maintenance and repair techniques and procedures.
  - f. Date of introduction of modifications and details of modification programs.

#### Statistical Measurement

8. The basis on which statistics are gathered has to be carefully defined. It has been the practice for this workshop to report monthly on the number of job arisings and completions by workshop sections. These statistics are based on the number of Repair Requisitions received and completed. As demonstrated in Annex B this basis of collecting workshop statistics can result in grossly wrong conclusions. This particular statistic showed a rising workload to an all time high in October 1970 whereas in fact the workload in most major equipment areas has been falling throughout 1970.

#### Progress Record Sheet

9. For the compilation of workshop statistics the Progress Record Sheet AB4175 is the most valuable of documents. It is easily handled and if correctly used contains an almost complete history of each job. For field workshops it should be modified to provide additional columns so that it can replace entirely the Register of Repair Requisitions, AB4176 which is for the main part a duplicate of information contained in the AB4175. A sample of a suitable combined AB4175/AB4176 is attached as Annex C.

Reorganization of Instrument Trade

10. The details of the instrument loading obtained from the analysis underlines the need to retain the instrument trade contrary to the proposal contained in the Special Training Edition of the Liason Letter released in 1970.

11. The experiance of this workshop shows that such a move would be entirely retrograde and would further complicate a repair field which already produces problems because of lack of equipment knowledge amongst tradesmen. If rationalization is necessary it would be easier, simpler and much more practical to move the Electronic Systems Fitters into the Instrument Trade than to disperse the instrument workload throughout the workshop.

12. Major problems would arise in the repair of:

- a. Optical instruments and accessories including weapon sights.
- b. Electro-optical instruments.
- c. Office machinery.
- d. Projectors and photographic equipments.

13. In order to meet the rising instrument workload two fitters have been moved into the instrument section. It has taken almost three months to obtain really worthwhile results from this move.

14. Field workshops need an Instrument Section staffed by equipment orientated tradesmen.

PROBLEM AREAS

Fuel Cells - M113A1

15. The repair of M113A1 fuel cells by reinforcing with aluminium channel has proved unsatisfactory. Details and a request for authority to repair by the fitting of stainless steel tanks in theatre have been sent under 106 Fd Wksp Q 1120 dated 2 Jan 71.

16. It is necessary in any case to in scale at least one stainless steel tank in case of operational damage.

Loss of Lubricating Oil - M113A1

17. There has been a significant number of cases of loss of oil from the transmission of M113A1 power packs in uparmoured vehicles. Cause has been loosening of pipes and drain plugs (including complete loss of drain plugs). DIR has been submitted with suggested remedy.

4.



Spare Parts - Land Rover

18. Non availability of Land Rover exhaust manifolds resulted in AAF F406 being issued for a further two vehicles.

Workshop Communications

19. In static locations, such as 106 Fd Wksp finds itself, it is essential that an intercom station (6 station) be included in the workshop entitlement. The only alternative is to bring the workshop switchboard into operation. This costs a man.

20. An application has been made for the issue of the appropriate item as a loan store

Forward Planning - Workshop Stores Accounts

21. Because of the size and complexity of this unit's stores accounts, and because of the value of individual items held on charge, it is necessary to commence Q action well before the time of receiving an order to move or disband.

22. It would be of great assistance if some guide could be given to the probable future of this unit. In the case of a move of any appreciable element of the workshop to Australia, the packing and production of shipping containers presents a heavy workload which is best phased. Disbandment produces a different set of problems. Some reduction of unit holdings could commence even now, but such an action would be unwise if the unit were required to return to Australia as a formed unit.

OPERATIONS OF INTEREST

Recovery

23. Thirty three recovery tasks were completed during the month. These included:

- a. Assistance to RAAF in Iroquois movement (two M543 used) and repair.
- b. Assistance to Province in an incident where a child had fallen into a well 60 ft deep with 10 ft of water and an oxen had fallen on top of the child. Throughout, the operation was hampered by lack of oxygen in the well. The beast was shot and removed. The child's body, however was trampled into the mud at the bottom of the well and was not recovered.
- c. Recovery of mined carriers.
- d. Miscellaneous crew work.

24. The Pettibone did six tasks for other units.

Forward Repair Team

25. A Forward Repair Team, A Vehicles, was deployed once during the month to replace a centurion suspension station in the field.

Unit Inspections

26. The unit underwent the following inspections during the month, all with satisfactory results:

- a. 1 ATF Administration Inspection.
- b. Fire Inspection.
- c. Ammunition Inspection.

Civil Action

27. Major Civil Action tasks undertaken were:

- a. Childrens Christmas parties - three.
- b. Swim trips - two.
- c. Manufacture of playground equipment - two sets.
- d. Repair of playground equipment - two sets.

Patrolling

28. A five man independent recce patrol consisting of a Corporal and four was provided on the night 13 Dec 70.

29. An eleven man ambush patrol consisting of a Sergeant and ten was provided on the night of 21 Dec 70. This patrol was deployed using fitters tracks.

30. The five man independent patrols have not been regarded favourably by sponsoring infantry company commanders. Approaches have been made for the inclusion of the five man team as part of an infantry patrol or alternatively the provision of eleven men patrols from the workshop on a less frequent basis. To this end it is intended to pass all sergeants through an operation with an infantry company before the patrols are required. One Sergeant has so far spent a four day period on operations with V Coy 2 RAR/NZ (ANZAC).

Mobile Telecommunications Repair Team

31. In conjunction with TF EME and with the concurrence of ADEME AFV an investigation was carried out to determine the feasibility of introducing the mobile telecommunications repair concept to support task force units.

/6.

32. This was found to be impracticable because units have dispersed their pools of signals equipments to sub units.

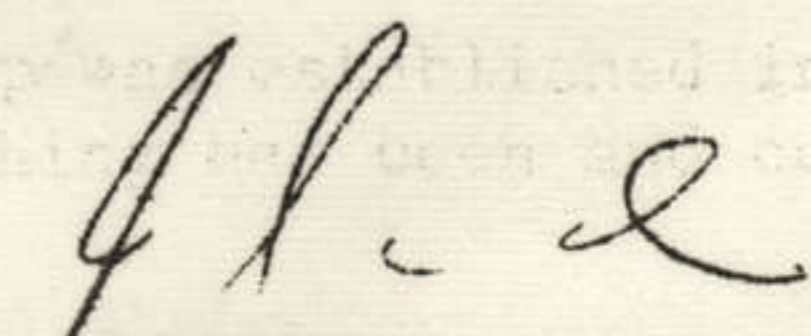
Maintenance of Unit Area

33. Following the second wet since the workshop was established in this location the requirement for rebuilding and refurbishing has been and continues to be high.

34. Areas requiring particular attention are:

- a. Liquid disposal systems.
- b. Defenses.
- c. Sand bag walls of tents.
- d. Ammunition point.
- e. Rooves of buildings.
- f. SAL blocks.
- g. Drainage systems.
- h. Grass removal.

35. The present lull in workshop loading is being used to carry out area repairs and reconstructions.

  
(J.S. SINCLAIR)  
Maj  
OC

Annexes:

- A. Production - 1970
- B. Analysis of Workshop Loading, May 69 - Dec 70
- C. Job Register and Progress Record Sheet - Fd Wksp

PRODUCTION - DEC 70

1. Production Table

	A	B	Fl	Elec	GE	SA	Inst	Tels	Total
Jobs Brought Forward	2	15	2	6	10	1	12	8	56
Jobs Received	15	41	1	48	44	31	151	201	533
Jobs Completed	14	43	3	52	43	31	156	174	516
Jobs Carried Forward	3	13	-	2	11	1	7	35	72

2. Major Equipment Repaired and In Progress on 31 Dec 70

	Comp	In Prog
Tank MBT & Dozer	6	1
M113A1	5	2
M125A1	1	-
Truck ¼ ton	2	-
Truck ¾ ton	2	3
Truck 2½ ton	3	2
Truck 5 ton	9	1
Truck 5 ton Dump	4	2
Tractor Size 5	2	-
Tractor Size 7	1	-
Trailer 35 Ton (Scammel)	1	-
Trailer 50 Ton	1	-
Gen Set (all types)	6	1
Trailers (all types)	1	-
Radio 25 Set	45	7

	Comp	In Prog
Radio C42 Set	11	8
Radio 524 Set	16	1
Typewriter	31	2
Projector	13	3
Sight Unit C2	6	-
Mine Detector P158	20	-

ANALYSIS OF WORKSHOP LOADING  
MAY 69 - DEC 70

Introduction

1. With speculation that there is to be a major reorganization of EME second line support for 1ATF it was appropriate to conduct a load analysis at this time to provide facts on which to base such planning.
2. In addition December 1970 was a low load month. It was necessary to determine whether this situation was the result of a seasonal fluctuation or indicated a trend.
3. This Annex presents quantitative measurement of the support provided by 106 Fd Wksp and examines trends in workshop loading.

Method of Analysis

4. Two types of statistics have been used in the analysis.
  - a. Requisition Arisings and Completions
    - (1) This statistic concerns the quantity of jobs received and completed based on Repair Requisitions processed. A single Repair Requisition has been taken to represent one job irrespective of the number of equipments repaired against the Requisition. For example, a single Repair Requisition may require the repair of 100 compasses. This is given a single job number and for the purpose of this statistic is counted as one job.
    - (2) The analysis of workload based on Requisition arisings and completions is of only limited value because it is not a direct measurement of workload. It has been included, however, because there was not sufficient time to gather more appropriate statistics in some production areas.
  - b. Equipment Arisings and Completions
    - (1) This statistic concerns the number of equipments received for repair. In this case where 100 compasses were received on the one Requisition it would be counted as 100 jobs, not one.
    - (2) This is a very direct form of measurement and provides a most accurate indication of workshop loading.

5. The statistics are presented in tables and graphs. The form used is the Z Graph which shows three collations.

- a. Monthly Figure: This is plotted in vertical bar and represents the number of jobs or equipments processed during the particular month. For each month the figures for 1969 and 1970 are both plotted.
- b. Cumulative Figures: The cumulative figure for each month, is the number of jobs or equipments processed since the beginning of 1970 to the end of that month. It is a line rising from zero at the beginning of the graph to the total years production at the end of December.
- c. Moving Annual Total: The Moving Annual Total (MAT) for each month is the number of jobs or equipments processed during the twelve months preceeding the end of that month. For example the MAT for Dec 1970 is the total production from the beginning of Jan 1970 to the end of Dec 1970; the MAT for Nov 1970 is the production from the beginning of Dec 1969 until the end of Nov 1970; the MAT for Oct 1970 is the production from the beginning of Nov 1969 to the end of Oct 1970 and so on. The resultant graph line is a raised lateral line. The angle of the line represents the load trend and gives an indication of the trend's significance. The value at each plotting measures the annual throughput for the workshop. It is the most valuable of the plots.

#### Extent of Analysis

6. The analysis based on Repair Requisitions is complete but a full analysis based on equipments has not been completed yet. However the information presented covers most major fields. These presentations are:

- Appendix 1 - A Vehicles
- Appendix 2 - B Vehicles
- Appendix 3 - Electrical
- Appendix 4 - Small Arms
- Appendix 5 - General Engineering
- Appendix 6 - Instruments
- Appendix 7 - Telecommunications
- Appendix 8 - All Equipments

Attachments: Appendices 1 - 8 (as listed above)  
Graphs 1 - 17  
Collation Tables 1 - 17



A VEHICLE LOAD ANALYSIS

Description of Load

1. The Workshop provides the following types of repair support to armoured units:
  - a. Supplementation of Cavalry and Armoured LAD by detachment of tradesman when they are understrength in essential trades and by the supply of Forward Repair Teams with equipment and repair parts to carry out unit and field repairs in the field.
  - b. Field repair to complete equipments in the Nui Dat Workshop.
  - c. Maintenance at all times of a prepared power pack for M113A1 class of vehicles.
  - d. Repairs to the following types of automotive assemblies for Centurion:
    - (1) Main brakes
    - (2) Steering brakes
    - (3) Main engine water pumps
    - (4) Auxillary generator water pumps
  - e. In addition other support by electrical, welding, general engineering, instrument and telecommunications systems, details of which are given in the applicable Appendix.

Statistics

2. Two graphs are presented:
  - a. Graph 1: This graph is plotted on the number of Repair Requisitions processed by the A Vehicle Section.
  - b. Graph 2: This graph is plotted on the number of Centurion Tanks and M113A1 class of vehicles repaired by the whole workshop. Excluded are some 51 carriers which were up armoured on a specific programme during the period Aug - Oct 1970.

Comment

3. Graph 2 shows a major drop in equipment repairs especially on Centurion Tanks. The trend is relatively constant and therefore significant and is reinforced by a similar downward trend in the repair arisings on radios, B47 and C42, fitted to the armoured vehicles (see Appendix 7 Graph).

4. Exact reasons can not be assigned for this trend at this time. Probable causes are:

- a. Reduction in modification programmes especially those carried out by welders and electronic system fitters.
- b. Reduction in the amount of work, especially heavy work, done by the vehicles during 1970 in comparison to 1969.
- c. Reduced effectiveness of enemy counter-equipment tactics.
- d. Increased output from unit LADs. This could be associated with the reduction of 106 Fd Wksp capacity for vehicle repair during the uparmouring programme. More likely, however, is reduced deployment of LAD Sections in the field leaving the LAD HQ elements with greater capacity.
- e. Tank fleet phasing resulting in the reduction of major assembly change requirements.

Deductions

5. The average weekly throughput in items of complete equipments is:

- a. Centurion - 2
- b. M113A1 - 3

B VEHICLE LOAD ANALYSIS

Description of Load

1. The workshop provides the following types of repair support for B Vehicles, Forklift Trucks and miscellaneous IC/CI engine driven equipments.
  - a. Service Station and unit repair for some units without organic first line support. Approximately 40 vehicles are involved.
  - b. An emergency repair service for transients in 1ATF Base.
  - c. Field repairs for all types of wheeled vehicles and trailers in the 1ATF Base up to a repair limit of approximately 80 man hours but with a number of jobs to 120 man hours.
  - d. All types of repair to forklift trucks.
  - e. Light field repair of generators up to 37.5 KVA.
  - f. Repair of miscellaneous IC/CI driven equipment such as pumps, mowers, chain saws
  - g. An inspection service for accident damage and condemnation of all these types of vehicles and equipments.

Statistics

2. Three graphs are presented:
  - a. Graph 3: This graph is plotted on the number of Repair Requisition processed by the B Vehicle Section. Excluded is work done by the Service Station/Light Repair Section
  - b. Graph 4: This graph is plotted on the number of major types of B Vehicles repaired:
    - (1) Land Rover
    - (2) 2½ Ton IHC
    - (3) 5 Ton IHC
    - (4) 5 Ton IHC Dump

- c. Graph 5: This graph is plotted on the number of forklift trucks repaired.

Comment

3. There is a significant uptrend in the number of B Vehicle repair arisings due almost entirely to the increased number of Land Rover repair arisings (an approximate 20% increase between the twelve months ending Apr 70 and the twelve months ending Dec 70).
4. There is also a significant uptrend, although of nowhere the same magnitude in the number of forklift repair arisings over the same year.
5. There has been no significant change in the arisings on International Trucks. However what is not indicated is the increase in the arisings of major brake overhauls on these vehicles.
6. Increases are probably due to an ageing fleet particularly for Land Rover and Forklift Trucks.

Deductions

5. The average weekly through put for field repair in terms of major equipment types is:
- |    |            |   |              |
|----|------------|---|--------------|
| a. | Land Rover | - | 7 and rising |
| b. | IHC        | - | 5            |
| c. | Forklifts  | - | 1            |
| d. | Generators | - | 2            |

ELECTRICAL WORKLOAD ANALYSIS

Description of Workload

1. The workshop provides the following types of electrical repair support:
  - a. The repair of all types of electrically driven equipment such as heaters, urns, kitchen equipment, fans, etc.
  - b. The repair of electricity generating and transforming equipments especially battery chargers and generators up to 37.5 KVA including assistance to units on unit supplied reticulation systems especially in FOBs and FSBs. Some assistance is also provided to CA in this respect.
  - c. Automotive electrical repair to all types of A and B Vehicles.
  - d. Workshop and in situ repair and adjustment of electrical/electronic control systems especially Centurion gun control equipment.
  - e. The repair, testing and preparation for installation of electrical/electronic gun control equipment assemblies used by this workshop on the Armoured Squadron LAD.
  - f. The repair of automotive and electrical driving and control assemblies and sub assemblies.

Presentation

2. A detailed examination of the quantitative nature of the electrical workload is not yet complete. Only Graph 6 is supplied which is plotted on the number of Repair Requisitions processed by the Electrical Section.

Comment

3. The electrical workload appears to be fairly constant but this can not be verified until a more detailed analysis is completed.

Deduction

4. The Electrical Section remains well loaded.

SMALL ARMS LOAD ANALYSIS

Description of Workload

1. The workshop provides the following types of small arms support:
  - a. Unit repair for units without organic armourers.
  - b. Overloaded unit repair for units with organic armourers.
  - c. Second line weapon repair for all units in 1ATF.

Presentation

2. A complete analysis has not yet been made. The only presentation is Graph 7 which plots the number of Repair Requisitions processed by the Armoury.

Comment

3. There has been a very significant fall away in the number of weapons requiring repair at this workshop since the reduction of the Task Force by one battalion in October 1970.
4. There is now insufficient work to keep the armoury operating on a full time basis.

Deduction:

5. Small Arms no longer provide a continuous workload.

GENERAL ENGINEERING WORKLOAD ANALYSIS

Description

1. The General Engineering group undertake the repair of miscellaneous mechanical equipment not repaired by other sections; reclamation of components and assemblies; manufacture and fabrication of components, assemblies and end items.
2. Major elements are:
  - a. Fitting
  - b. Machining
  - c. Welding
  - d. Sheet and plate metal working
  - e. Textile
  - f. Carpentry
  - g. Painting
3. This group provides many facilities for other LADs and units. Of particular importance is the provision of heavier machine tools such as 7 inch lathe, radial drill, power hacksaws, guillotines and heavy duty welding machines for all types of metals. The repair of A Vehicles generally, heavy C Vehicles and the heavier body and chassis work on B Vehicles in the 1ATF area is very dependant on the availability of these facilities.
4. This group also provides a major means of off setting difficulties in the supply of spare parts due to the temporary provision difficulties and of supplying non maintained and low usage parts e.g. semi trailer turn tables.
5. A large work load arises in support of CA.
6. A heavy welding load arises in support of both the M113A1 Carriers and Centurion Tanks.

Statistics

7. Only Graph 8 is presented and this is plotted on the number of Repair Requisitions processed by the General Engineering group.

Comment

8. There has been a fall in work arising and actual loading from about Oct 70. Although this coincides with the reduction to a two battalion Task Force, the fall is not considered to be entirely due to that cause.

9. The main fall has been in the fitting section. The remainder of the group remains well loaded especially for machining and welding. There has been a reduction in the welding workload so that the section is now working at a more reasonable pace of 54 hours per week.

Deduction

10. Ancillary support sections remain well loaded but the fitting load has dropped significantly. The reasons for the latter are not known.

Comment

8. There has been a fall in work arising and actual loading from about Oct 70. Although this coincides with the reduction to a two battalion Task Force, the fall is not considered to be entirely due to that cause.

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Deduction

10. Ancillary support sections remain well loaded but the fitting load has dropped significantly. The reasons for the latter are not known.



INSTRUMENT LOAD ANALYSIS

Description of Workload

1. The Instrument Section undertakes the following main categories of repair:
  - a. Office machinery
  - b. Projectors and Photographic Equipment
  - c. Optical sights, test equipment, vision and range measuring aids.
  - d. Various types of finely constructed mechanical and pneumatic guages, instruments, equipments and assemblies such as compasses, binoculars, plotters, speedometers, tacho gen sets, pressure guages etc.
  - e. Manufacture and reclamation of finely toleranced small metal components.
2. Priority loadings particularly occur for Movie Projectors, Office Machines and weapon sights especially C2 mortar sights. Topo. Survey equipment whenever arising for repair is usually a high priority in situ repair.
3. The Instrument Section runs an inspection and adjustment service for movie projectors at the Amenities Centre every Sunday morning.

Statistics

4. The following graphs are presented:
  - a. Graph 9: This graph is plotted on the number of Repair Requisition processed by the Instrument Section.
  - b. Graph 10: This graph is plotted on the numbers of typewriters, other office machines and movie projectors repaired. The figures for movie projectors does not include the work done at the Amenities Centre every Sunday morning.
  - c. Graph 11: This graph is plotted on the number of watches and compasses repaired.
  - d. Graph 12: This graph is plotted on the number of mechanical, pneumatic and electrical guages, instruments and equipments repaired. It includes a wide variety of items such as artillery plotters and aiming circles, sliderules, speedos, tacho gen heads.

ammeters and voltmeters, regulators etc. Topo Survey equipment is included here.

- e. Graph 13: This graph is plotted on the numbers of binoculars and miscellaneous optical items repaired. Miscellaneous optical items includes weapon sights, artillery directors, periscopic binoculars, starlight scopes, etc.

Comment

5. There has been a significant 33% increase in the Instrument workload for the twelve months ending Dec 70 compared to that for the twelve months ending Apr 70. The increase has been at a relatively steady rate and the trend is confirmed. For this reason a detailed analysis of the workload was undertaken.
6. This analysis shows that the only area where the workload has decreased is in optics. No explanation can be given for this.
7. The increased workload on typewriters and other office machines appears to be related to aging of the equipments.
8. The increased workload on projectors is mostly due to increased population but some of the increase is due to ageing of equipments.
9. The very large increase in compass arisings can not be explained.
10. The very large increase in watch arisings is due to the decision to undertake the repair of 'throw away' watches. In actual fact between 400 and 600 only of these watches have been repaired. The remainder were not repairable.
11. The increase in miscellaneous non-optical work can not be explained. Part is probably due to ageing.

Deductions

12. There has been a heavy increase in instrument work which has required the transfer of two fitters armament to this section to meet the load. Priority instrument work occurs frequently.

TELECOMMUNICATION LOAD ANALYSIS

Description of Workload

- 1; The main element in the workload is the repair of radios, especially PRC 25, RT 524, C42 and B47. Most repair is effected by component or module change with realignment. Priority work is particularly associated with the C42 and B47 radios used in armoured vehicles. Some proportion of the PRC 25 and RT 524 are also required at high priority.
2. Other priority work arises on switchboards, mine detectors, Psy Ops sound equipment and movie projector amplifiers.
3. A reasonably large, but seldom priority loading arises on radio accessories (such as headsets, harnesses etc), telephones (especially for cords and earphone elements), tape recorders and radio receivers supplied to units by Amenities.
4. Switchboards are a matter of special concern. To assist, the workshop holds a spare switchboard on unit charge to enable a direct exchange facility to be provided.

Statistics

5. The following graphs are presented:-
  - a. Graph 14. This graph is plotted on the number of Repair Requisitions processed by the Telecommunications Section.
  - b. Graph 15. This graph is plotted on the numbers of PRC 25 and RT 524 radios repaired.
  - c. Graph 16. This graph is plotted on the numbers of B47 and C 42 radios repaired.

Comment

6. The general loading on the Telecommunications Section has remained fairly constant although there has been a slight fall in the number of radio sets requiring repair.
7. The arising of PRC 25 has remained fairly constant. There appears to be a slight downward trend of about 2% over the studied period. This is not significant. The major fall has, however, been since Sep 70 and may relate to the reduction of one battalion in the 1 ATF ORBAT.
8. There has been a significant increase of approximately 50% in the arising of RT 524 for repair. This is thought to be mainly due to increased population.

9. The fall in the arisings of both the B47 and C42 radios is thought to be related to the fall in Centurion repairs generally (see Graph 2) and reinforces the view that the tanks have not engaged in as heavy work in 1970 compared to 1969. However, because of the limited number of such radios available to the Squadron, these radios always form a high priority repair load.

Deductions

10. The Telecommunications Section remains fully loaded with heavy arisings of priority work.

ANALYSIS OF ALL EQUIPMENT WORKLOAD

1. Graph 17 is plotted on all Repair Requisitions processed by this workshop.
2. The overall analysis of workshop loading is difficult because of the specialist breakdown of the workload.
3. This graph gives the impression that the workshop loading increased to an all time high in Oct 70 and has since fallen away sharply. As shown in the previous Appendices this is not strictly true. The workload has decreased in certain major areas especially A Vehicles, Fitting and Small Arms. There have however been increases in other areas particularly Instrument and B Vehicles. In other areas, such as Electrical and Telecommunications the loading has been relatively steady.

JOB REGISTER AND PROGRESS RECORD SHEET  
FIELD WORKSHOP

Month.....19.....

Wksp Section.....

AB4175/AB4176 (Combined)

- O - Ordered in                      IN - Inspection
- R - Received                      N - Work not started
- W - To Workshop                      P - Held up for parts/material
- C - Completed                      L - Held up for labour
- I - Issued to owner unit      A - Held up for ancillary work

EDC is to be entered prior to commencement of job.  
 It is not to be altered without approval.

- Disposal:      X - Job completed this month  
                     T - Job transcribed to next months sheet

Wksp Job No	Unit	Unit Ref No	Date of 1045	Date Job Reg	Item	Qty/Reg No	ERT	EDC

25 Lines

31 Columns  
 No 1 - 31  
 ←                      →

JOB REGISTER AND PROGRESS RECORD SHEET  
 FIELD WORKSHOP

Month.....  
 Wksp Section.....

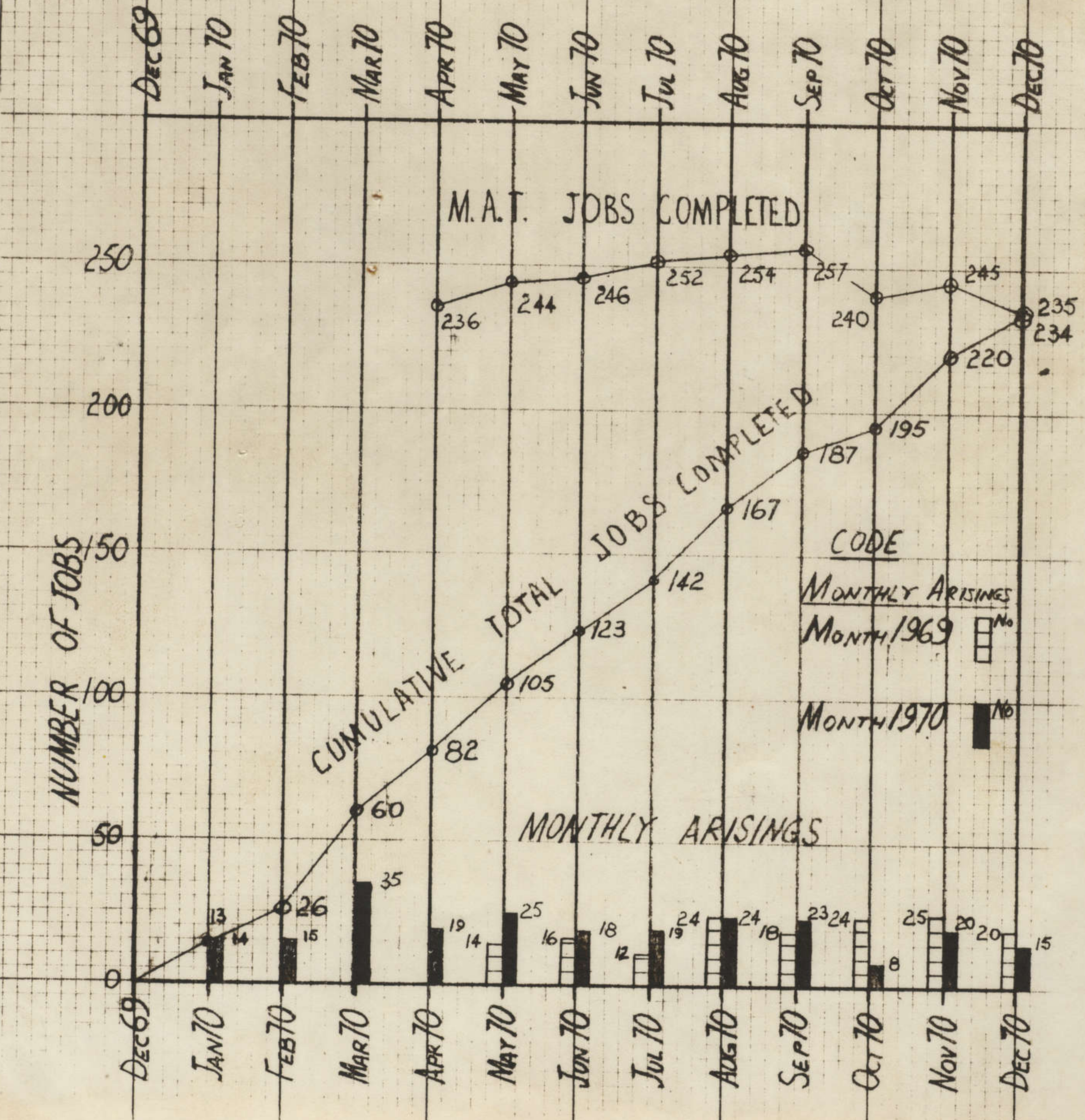
**Remarks:** To be used for daily planning data. Record any details which will effect future maintainability such as local modifications or change in repair techniques.

SUMMARY										
No of days from _____ days										
Wksp Job No	Req date of job req'd	Registered to								
		IN	W	C	I	W to C	N	L	A	P

Remarks

25 Lines

A VEHICLES

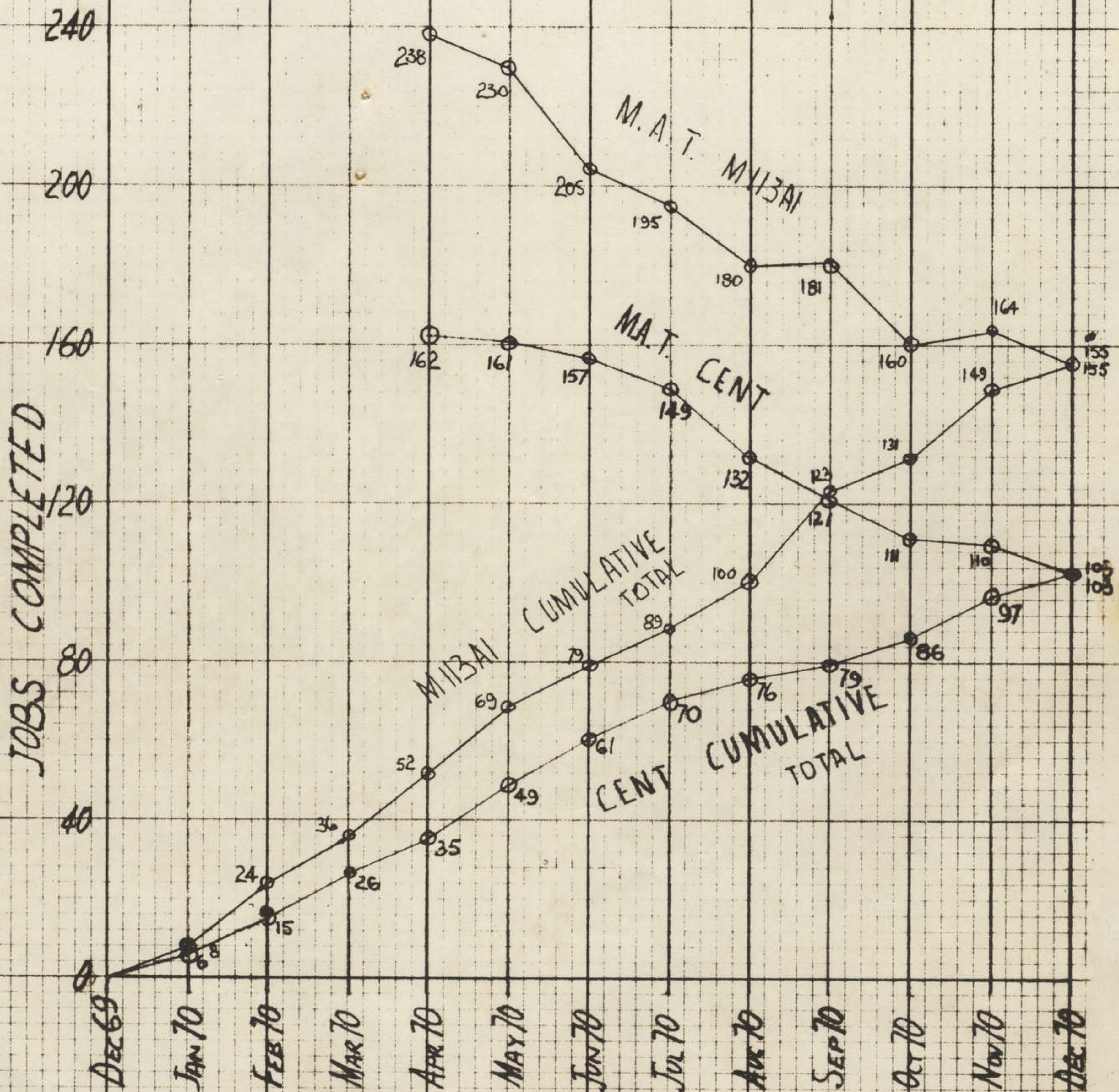
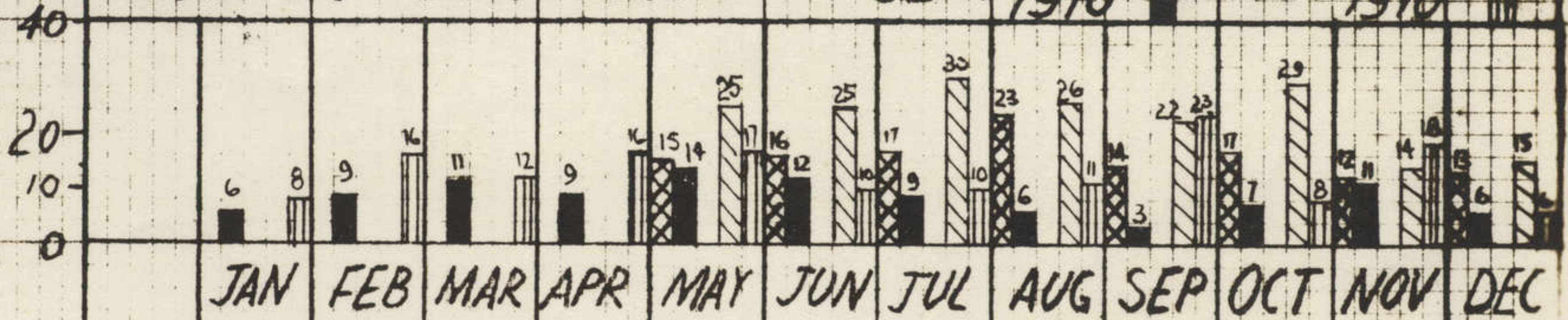




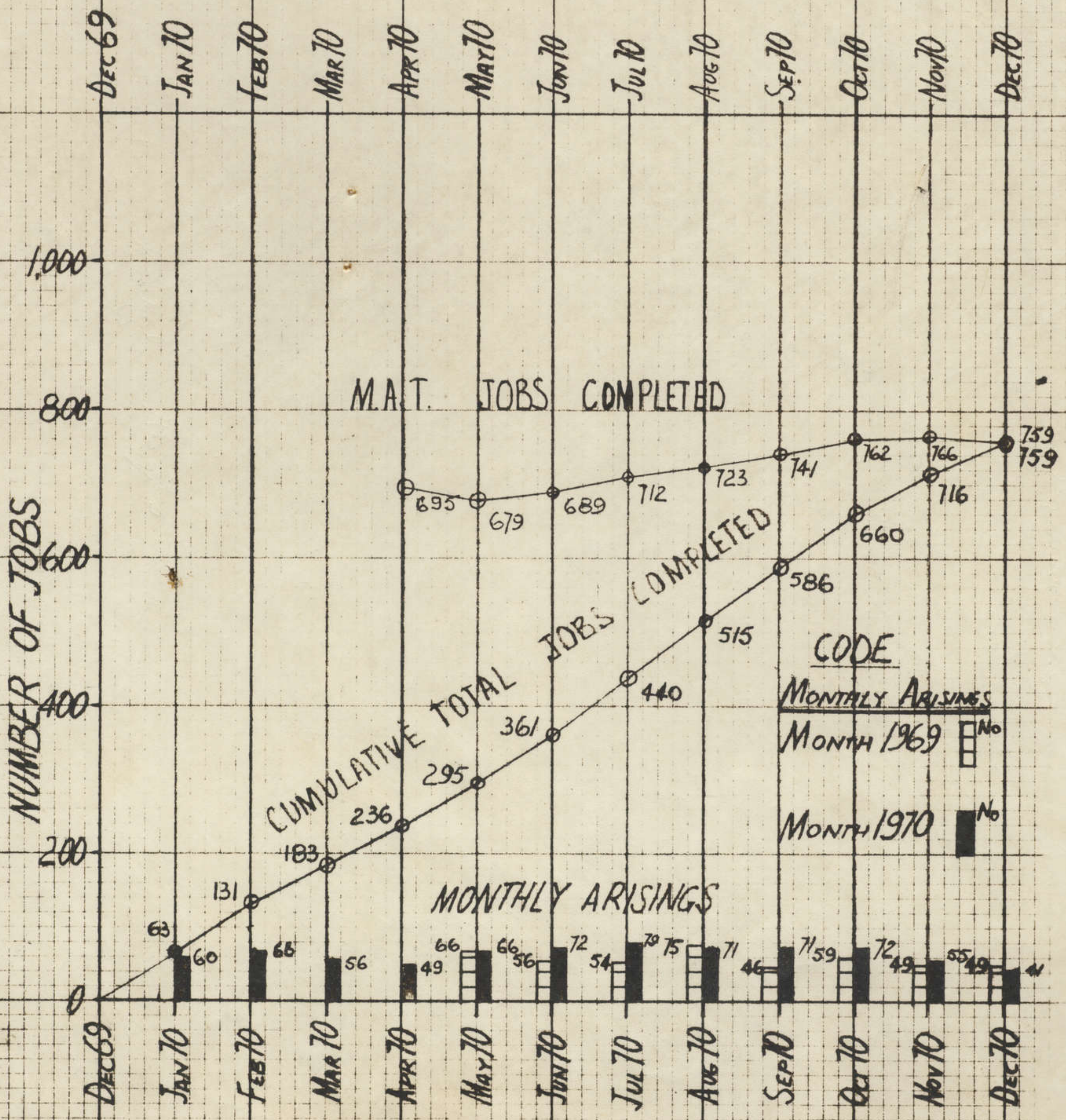
# CENTURION & MIIBAI/ACV/MISTAI

2

## MONTHLY COMPLETIONS CENT 1969 MIIBAI 1969

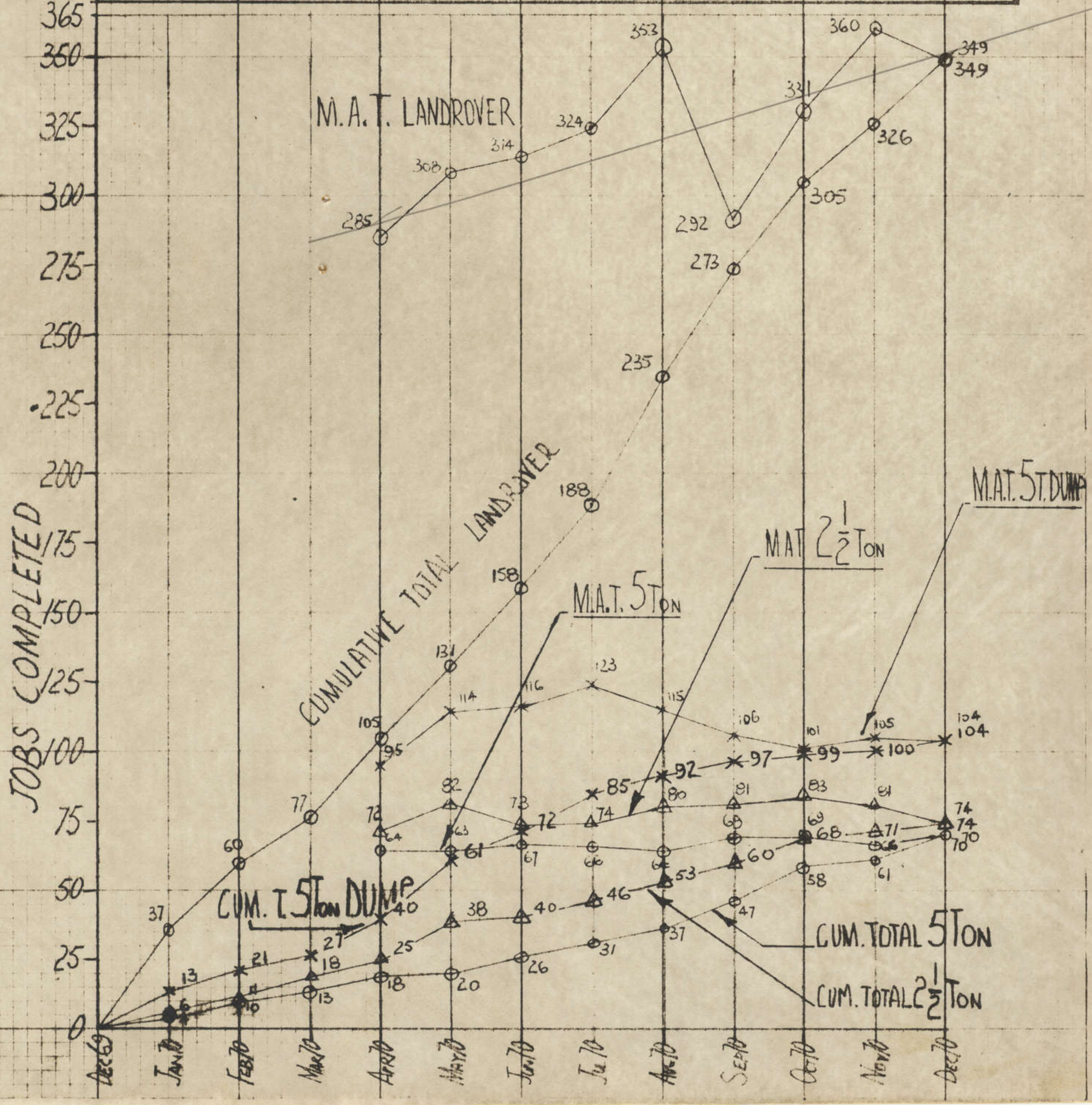
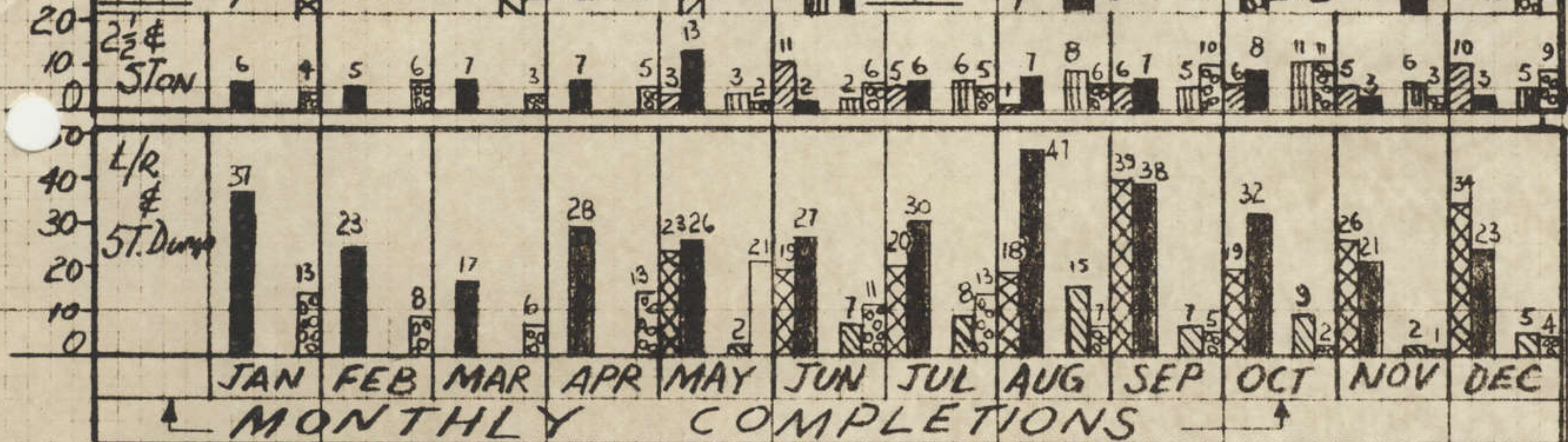


# B VEHICLES

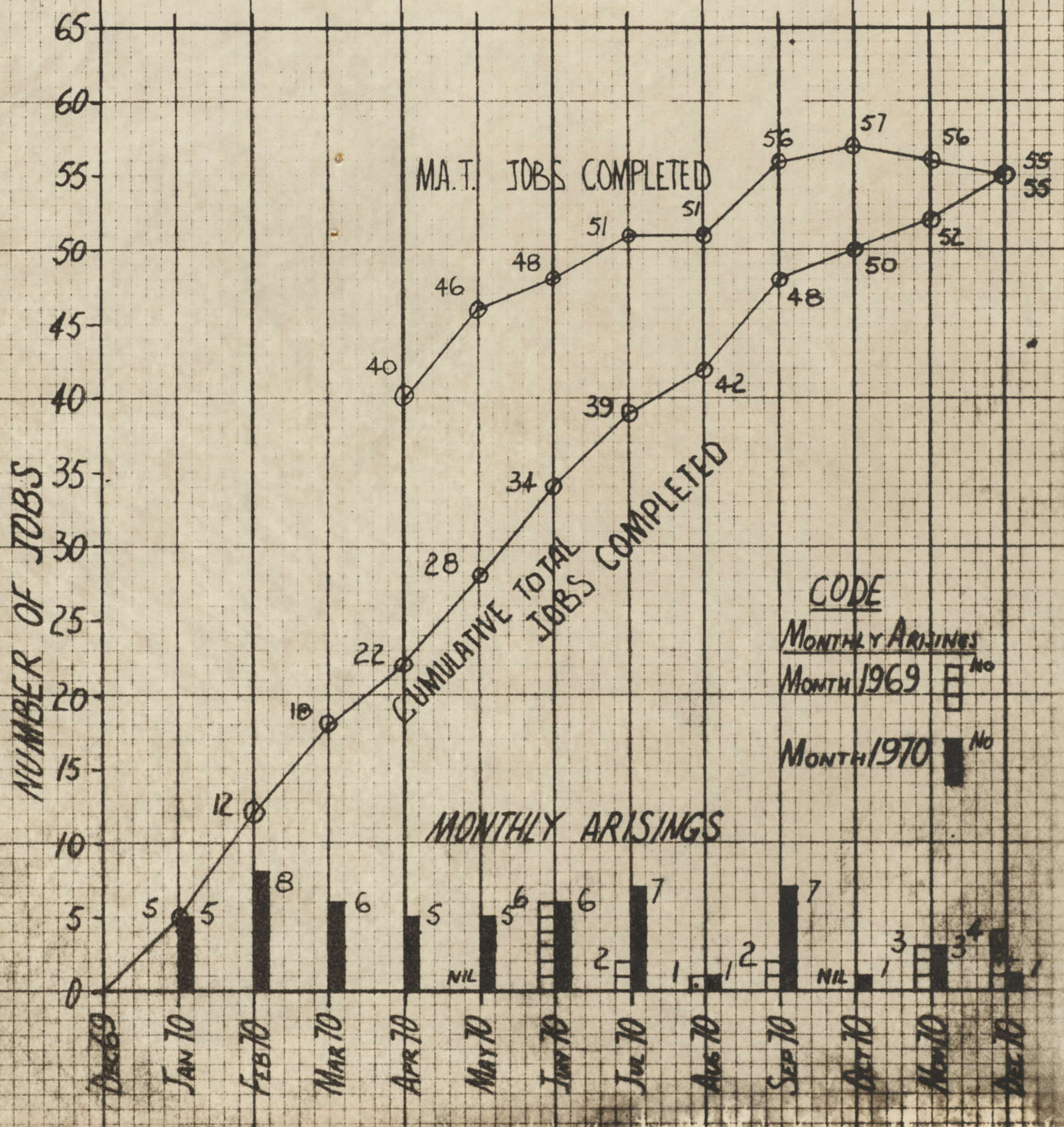


# LANDROVER - 2 1/2 TON - 5 TON - 5 TON DUMP 4

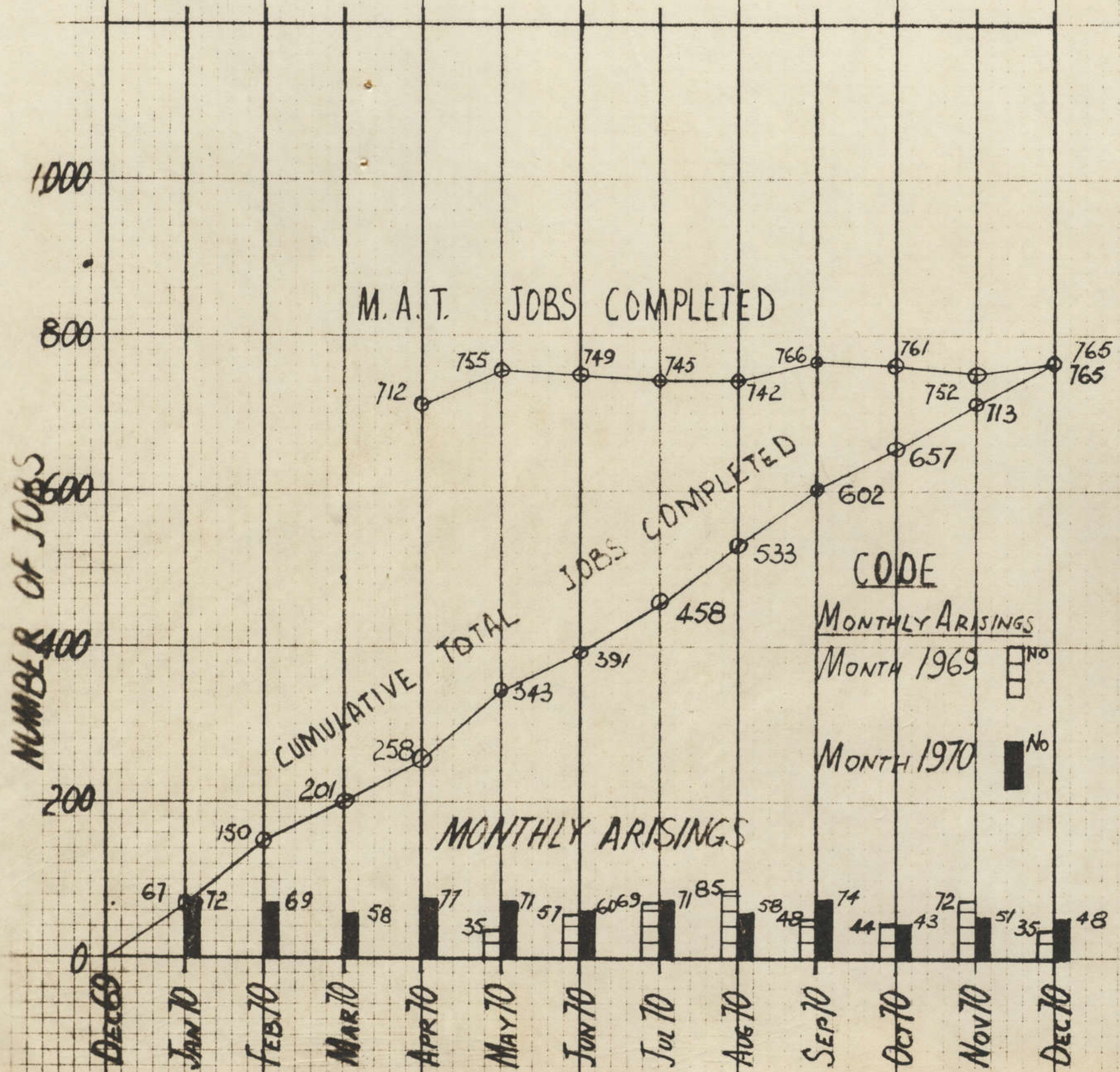
1969: L/R 5T.Dump 2 1/2 Ton 5Ton 1970: L/R 5T.Dump 2 1/2 Ton 5Ton



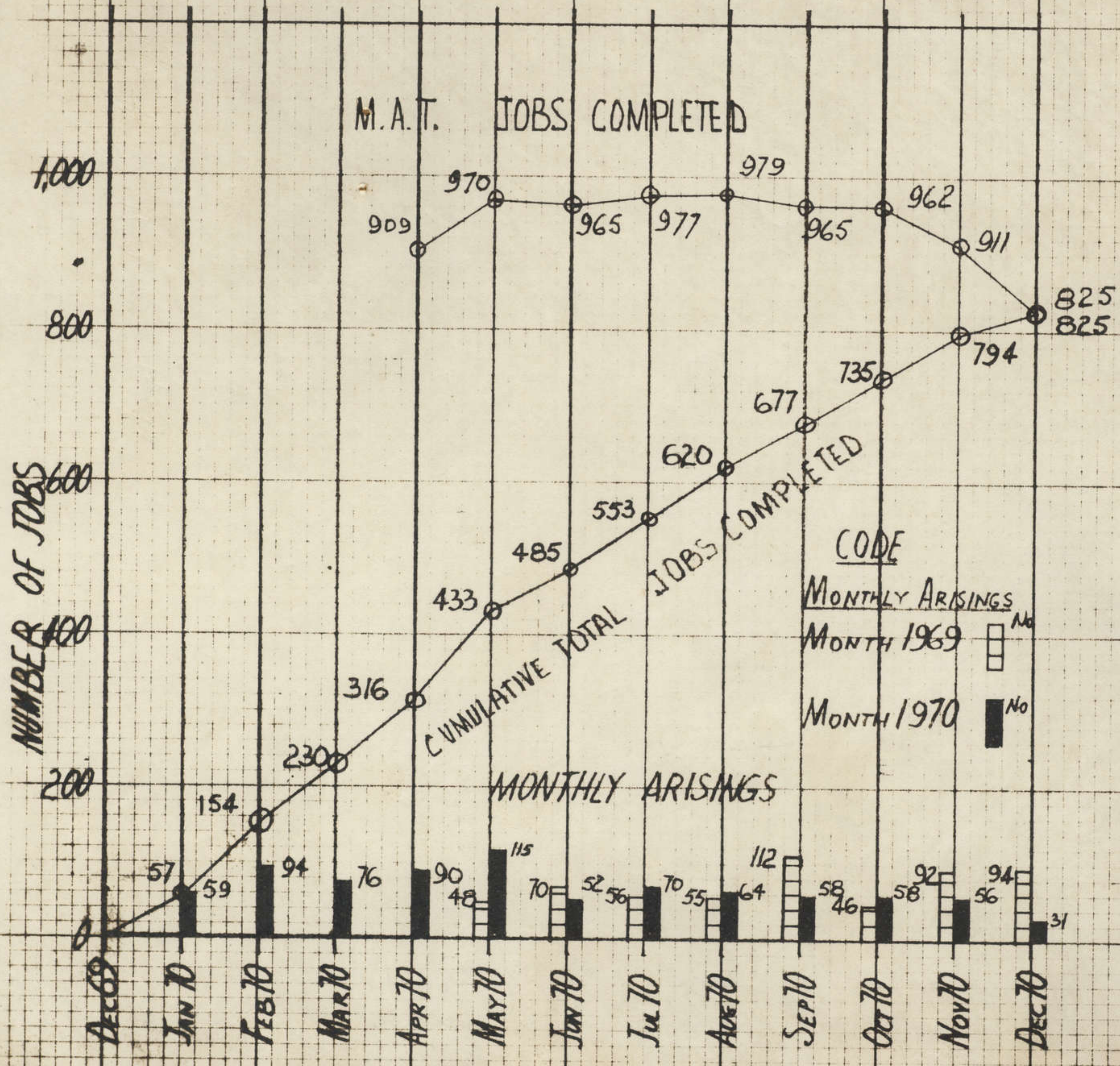
# FORKLIFT TRUCKS



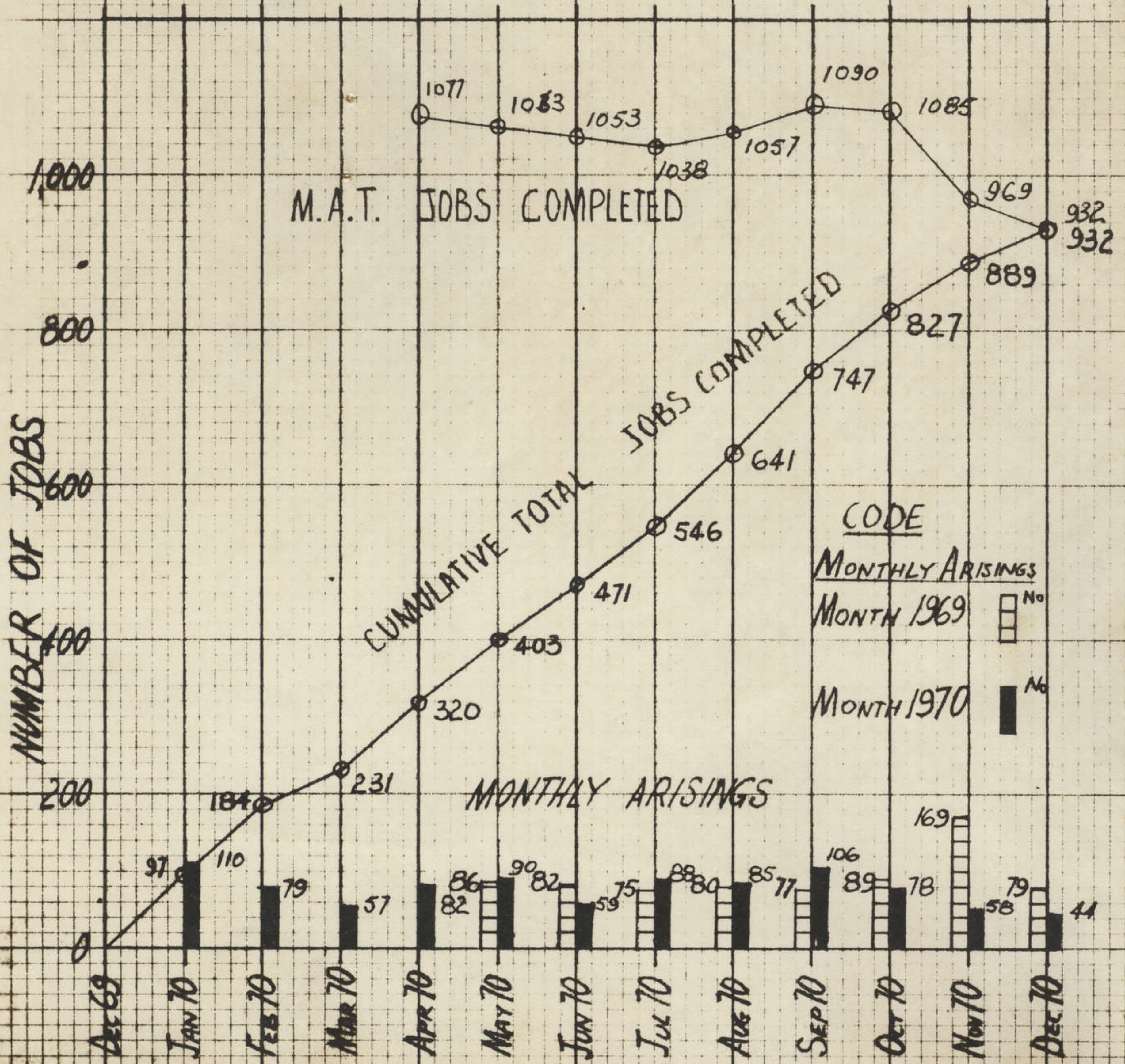
# ELECTRICAL



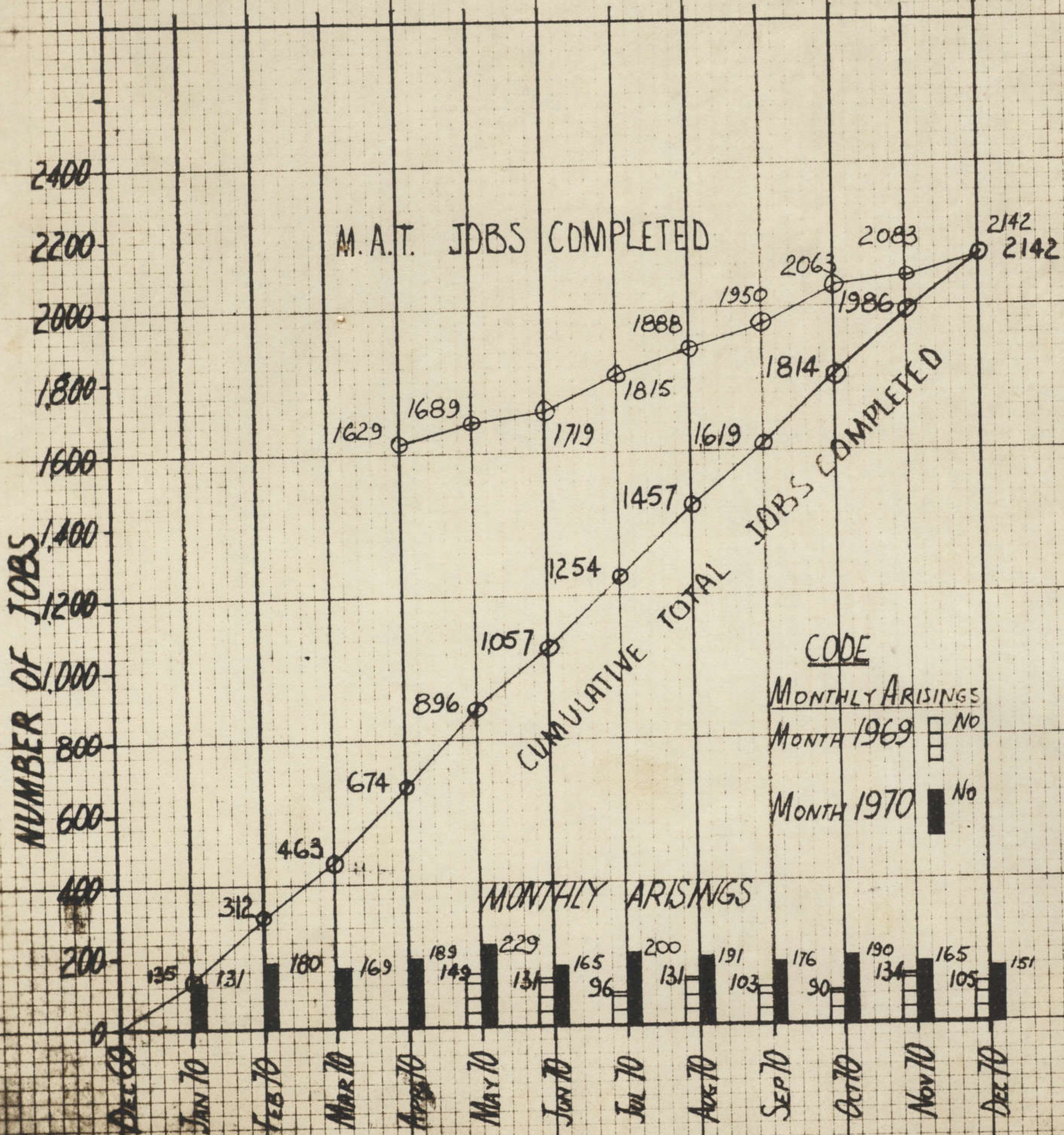
# SMALL ARMS



# GENERAL ENGINEERING



# INSTRUMENT

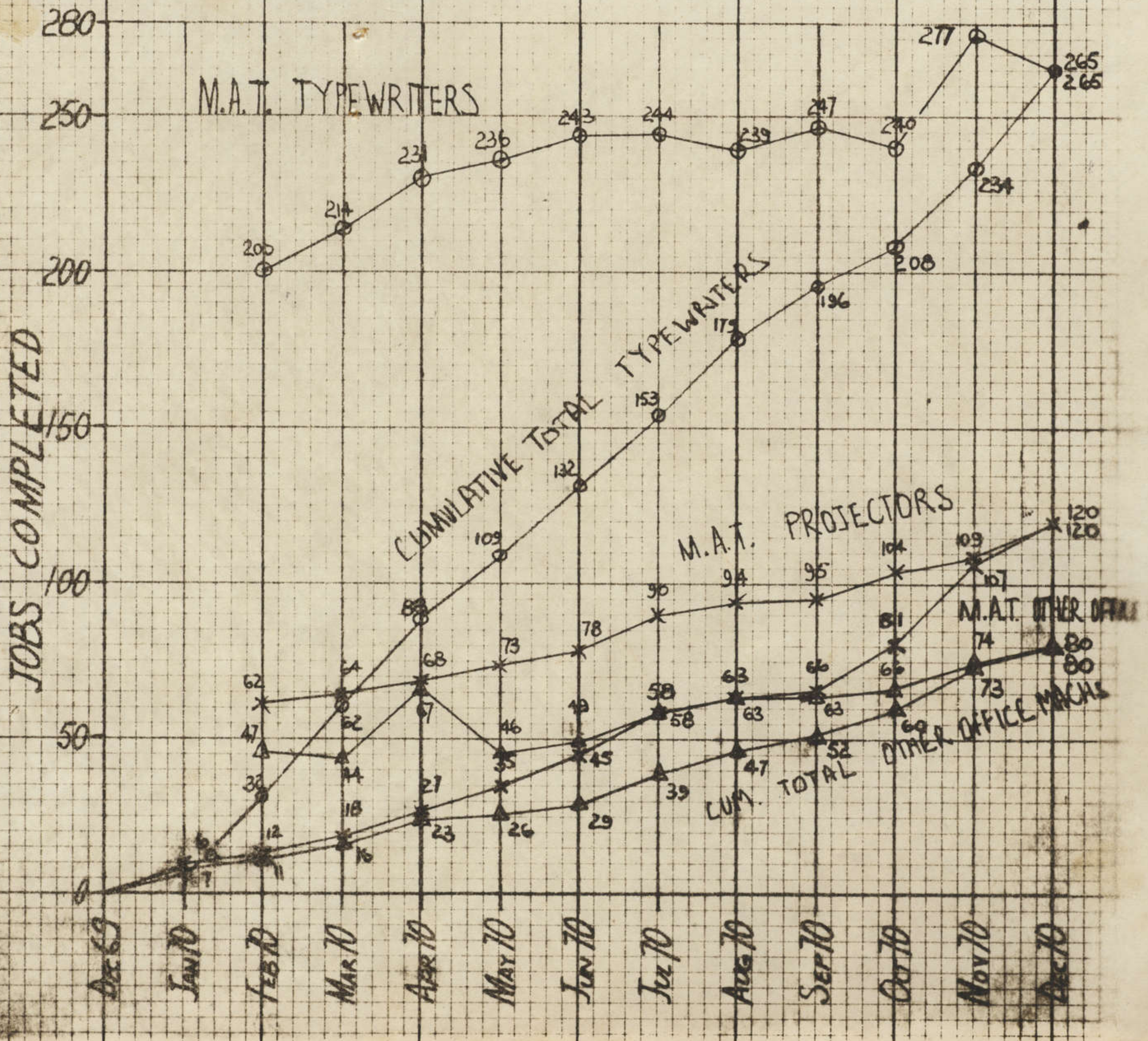
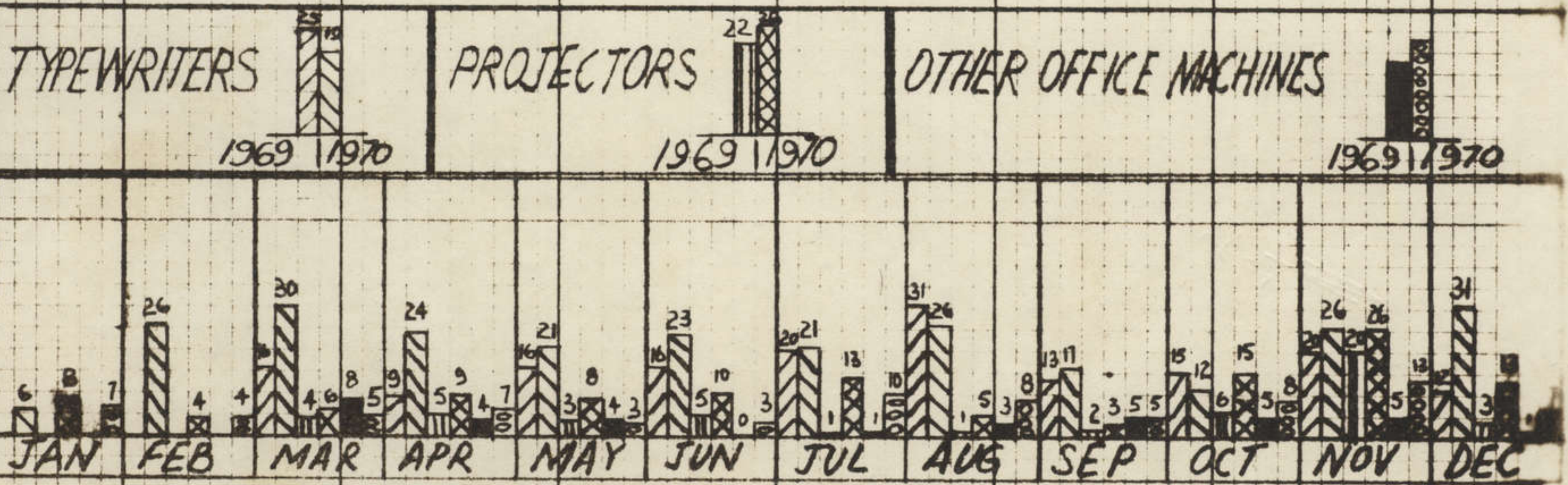


(9)

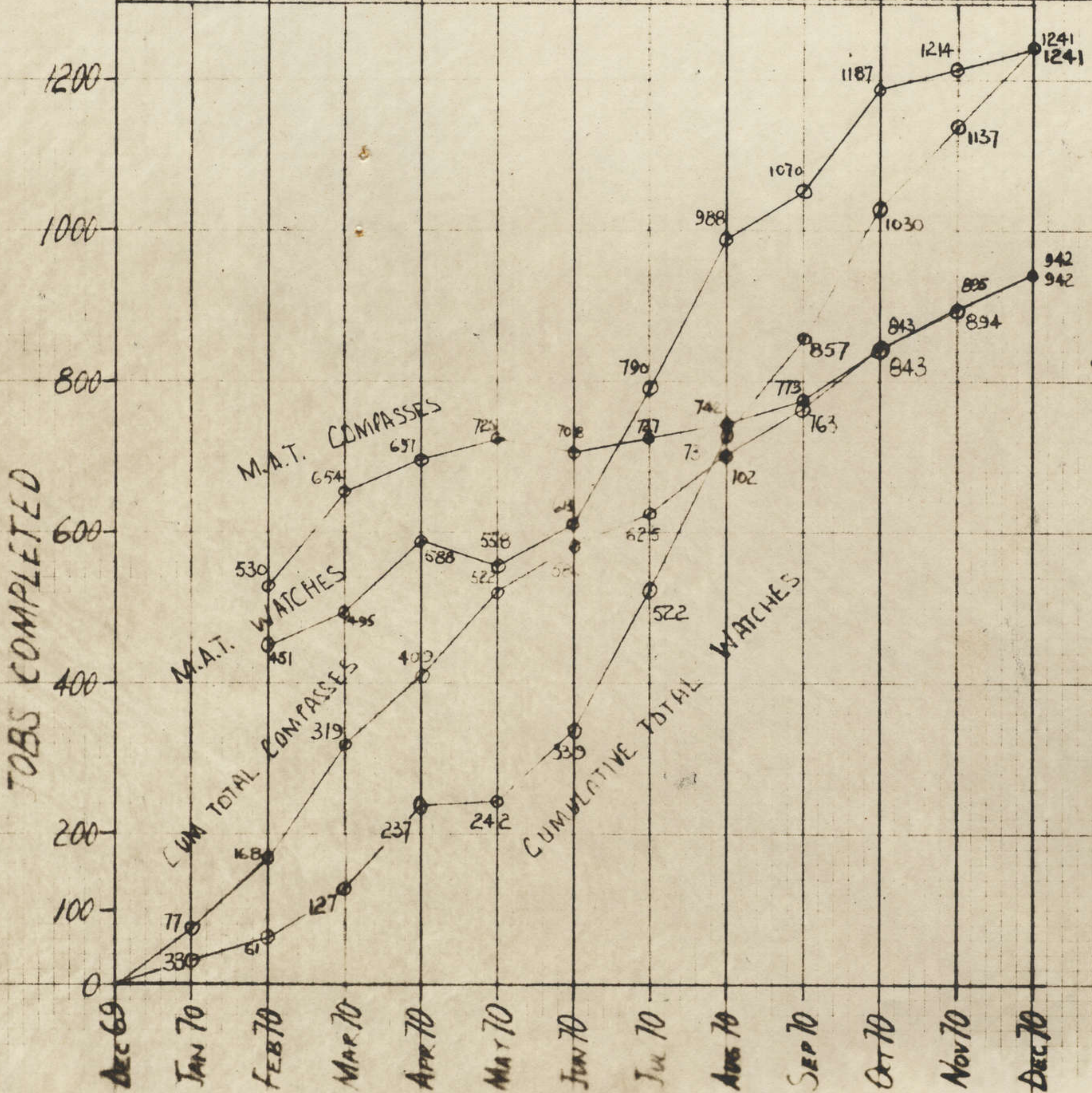
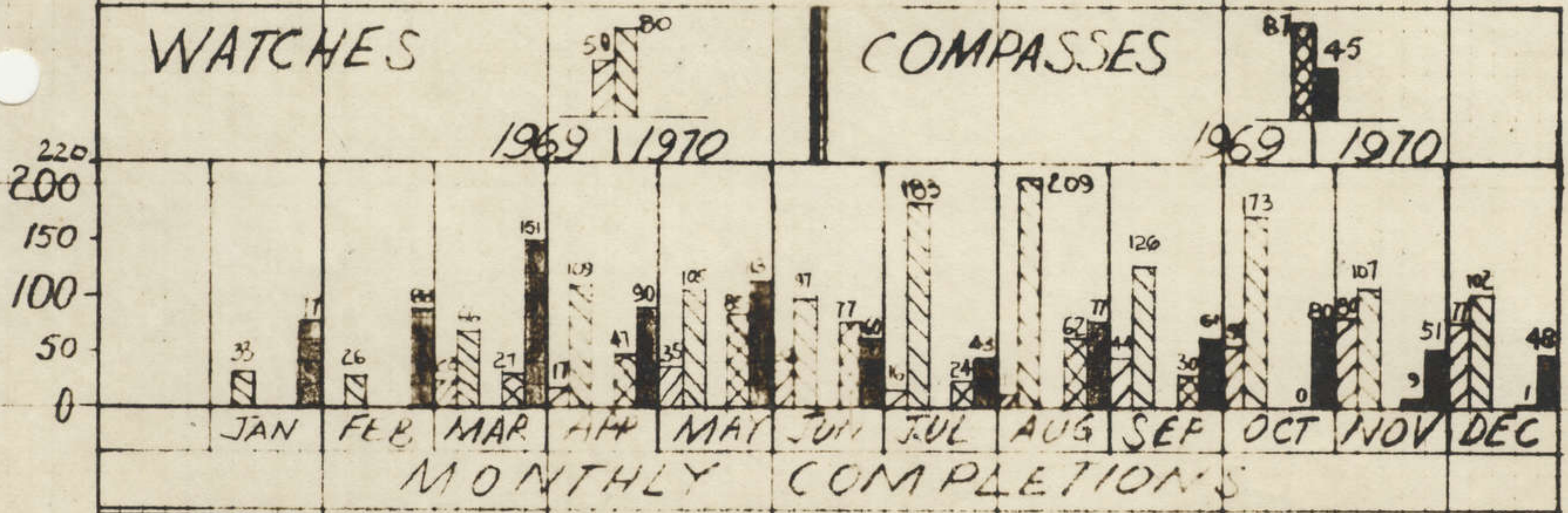


# TYPEWRITERS, PROJECTORS & OTHER OFFICE MACHINES

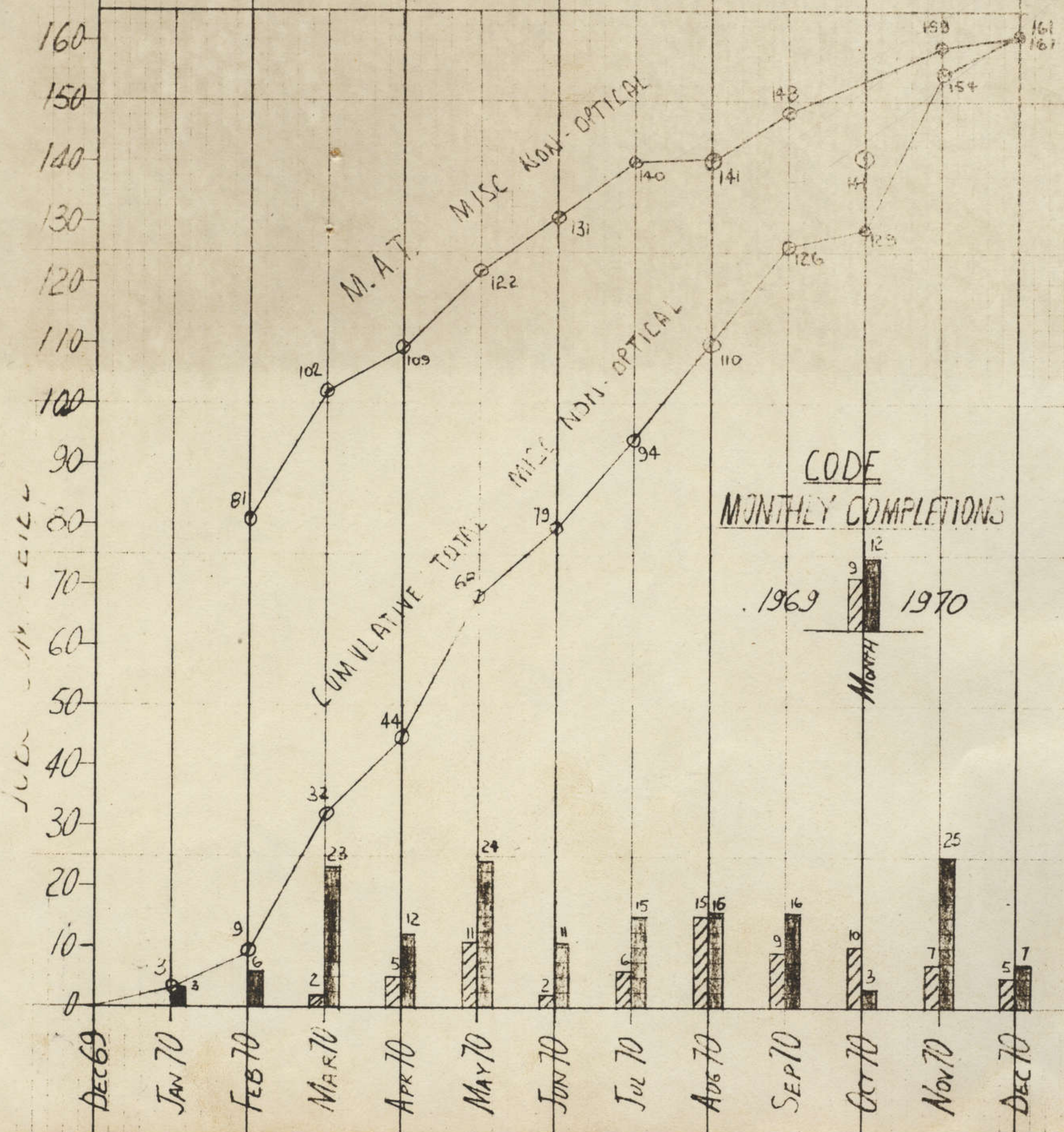
## MONTHLY COMPLETIONS



# WATCHES & COMPASSES

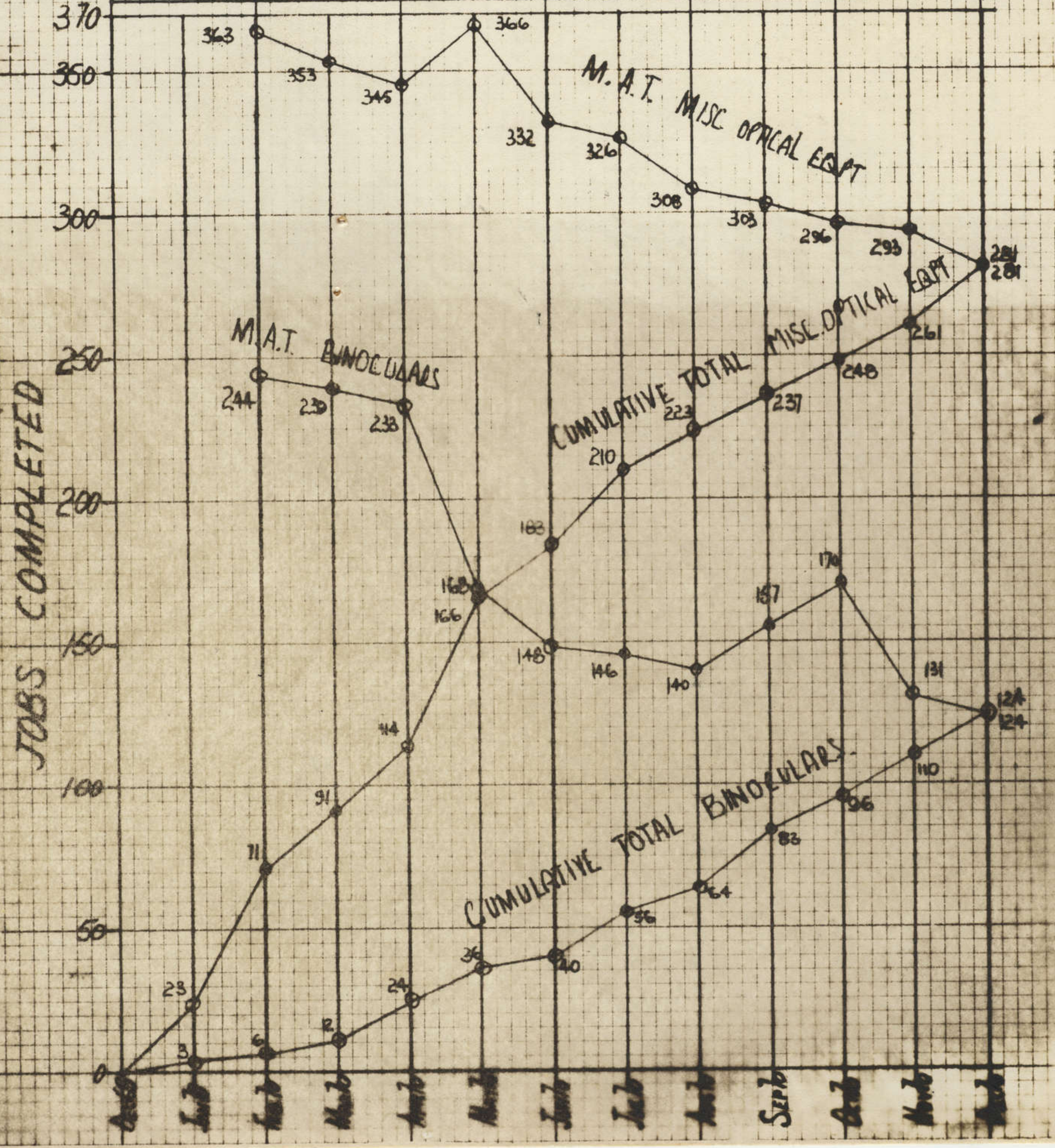
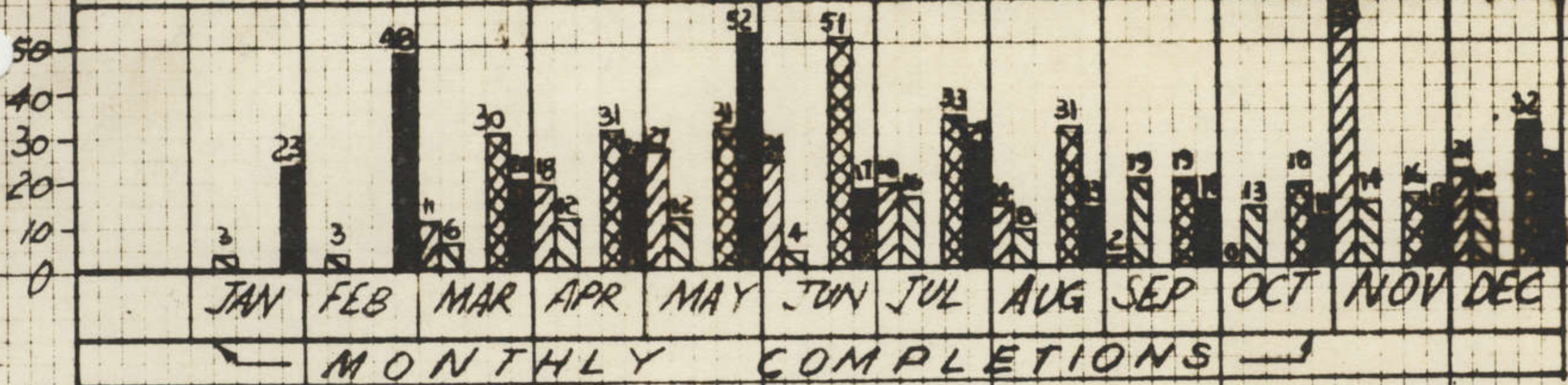


# MISCELLANEOUS NON-OPTICAL

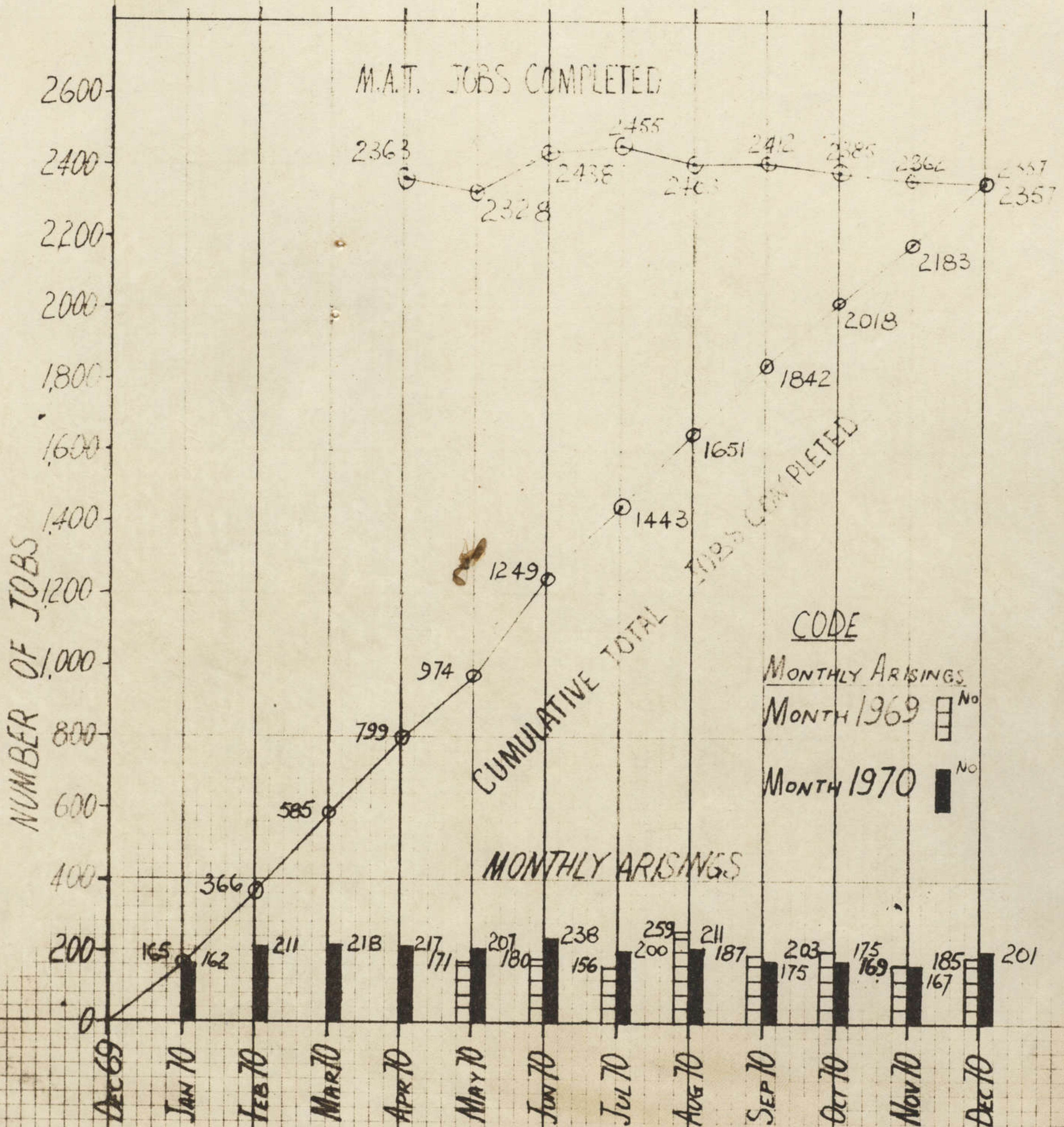


# BINOCULARS & MISCELLANEOUS OPTICAL EQPT

BINOCULARS: 1969 1970 MISCELLANEOUS OPTICAL EQPT: 1969 1970

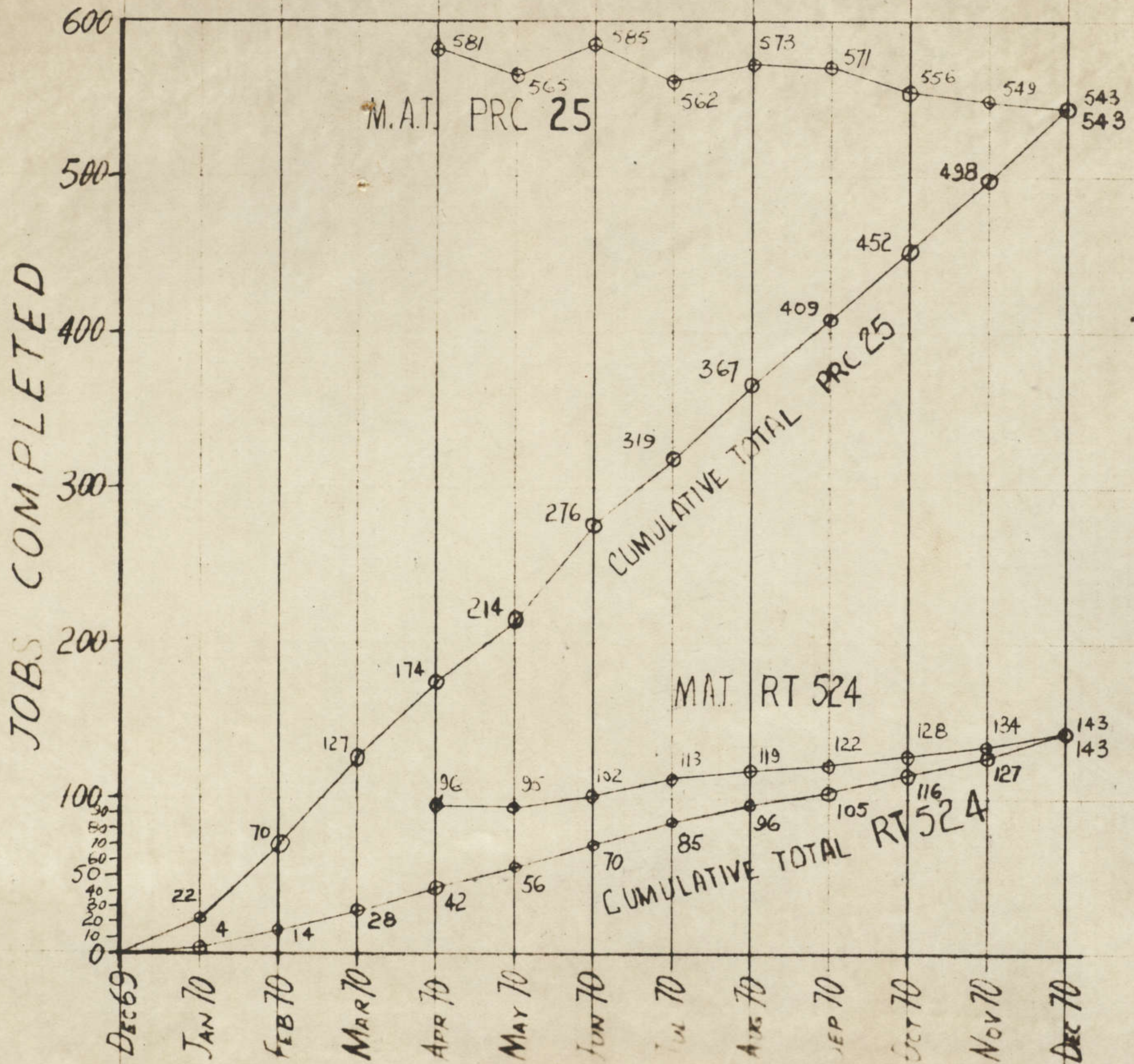
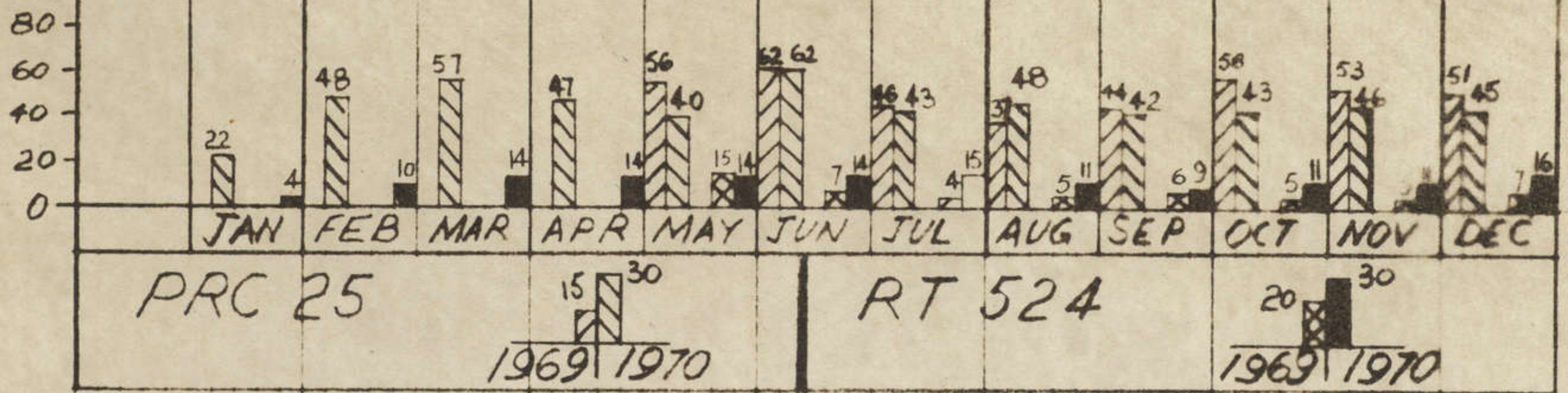


# TELECOMMUNICATIONS



# RADIO SETS PRC 25 & RT 524

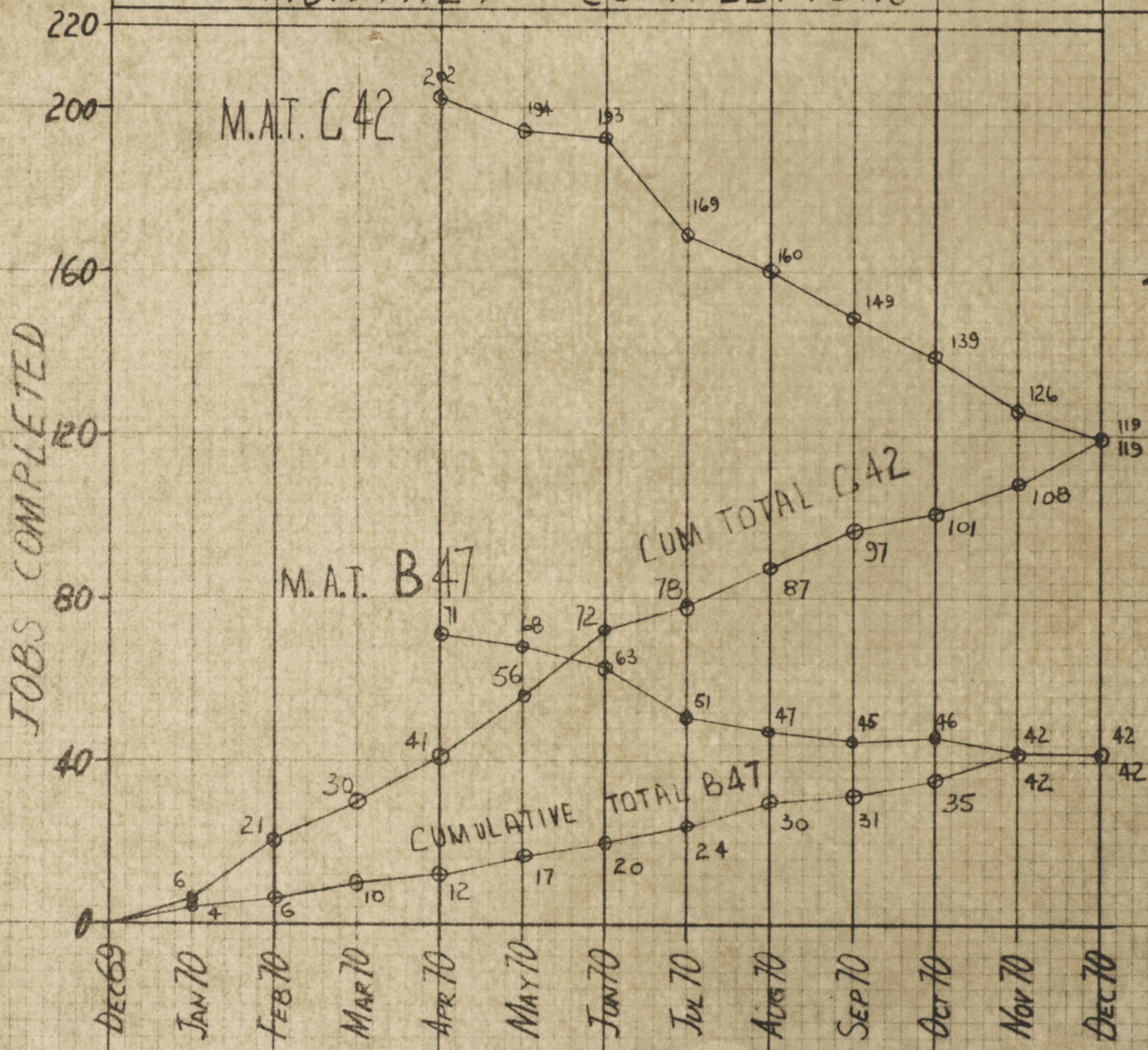
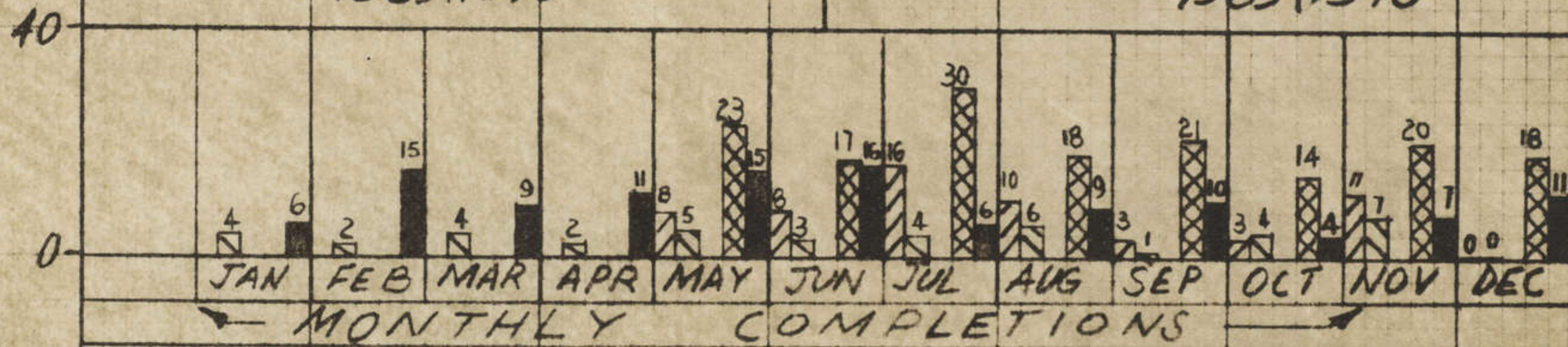
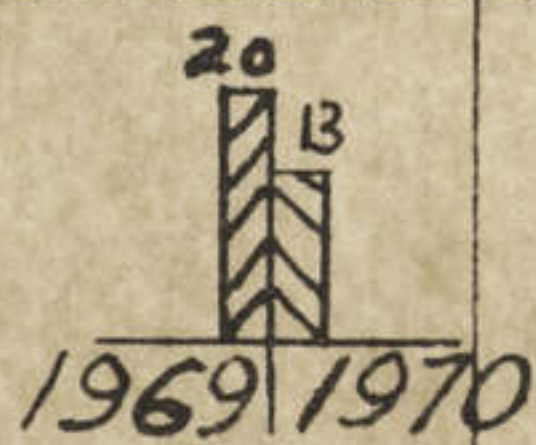
## MONTHLY COMPLETIONS



# RADIO SETS B47 & C42

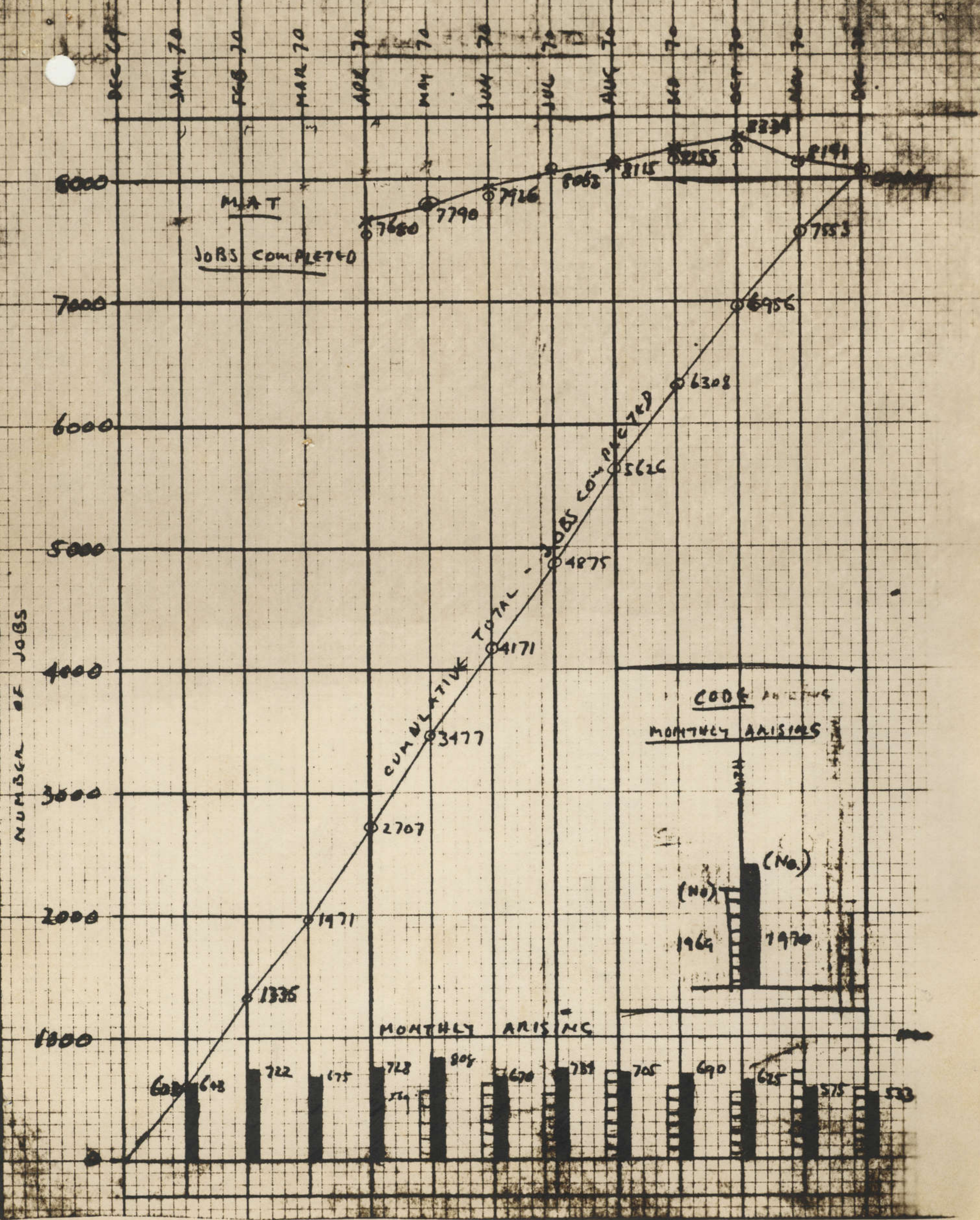
B47

C42



(16)

# ALL EQUIPMENTS





# ARISINGS A VEHICLES REQUISITIONS

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		14	14	
Feb		15	29	
Mar		35	64	
Apr		19	83	236
May	14	25	108	247
Jun	16	18	126	249
Jul	12	19	145	256
Aug	24	24	179	266
Sep	18	23	192	261
Oct	24	8	200	245
Nov	25	20	220	240
Dec	20	15	235	235

# COLLATION TABLE FOR GRAPH No 1

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		13	13		3
Feb		13	26		5
Mar		34	60		6
Apr		22	82	236	3
May	15	23	105	244	5
Jun	16	18	123	246	5
Jul	13	19	142	252	5
Aug	23	25	167	254	4
Sep	17	20	187	257	7
Oct	25	8	195	240	7
Nov	20	25	220	245	2
Dec	25	14	234	235	3

# A VEHICLE EQUIPMENTS

COLLATION TABLE FOR GRAPH No 2

CENTURION				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		6	6	
Feb		9	15	
Mar		11	26	
Apr		9	35	162
May	15	14	49	161
Jun	16	12	61	157
Jul	17	9	70	149
Aug	23	6	76	132
Sep	14	3	79	121
Oct	17	7	86	111
Nov	12	11	97	110
Dec	13	6	103	103

M113A1/ACV M577					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		8	8		
Feb		16	24		
Mar		12	36		
Apr		16	52	238	
May	25	17	69	230	
Jun	25	10	79	205	
Jul	30	10	89	195	
Aug	26	11	100	180	
Sep	22	23	123	181	
Oct	29	8	131	160	
Nov	14	18	149	164	
Dec	15	6	155	155	

# B VEHICLES REQUISITIONS

COLLATION TABLE FOR GRAPH No 3

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		60	60	
Feb		66	126	
Mar		56	182	
Apr		49	231	685
May	66	66	297	685
Jun	56	72	369	701
Jul	54	79	448	726
Aug	75	71	519	722
Sep	46	71	590	747
Oct	59	72	662	760
Nov	49	55	717	766
Dec	49	41	758	758

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		63	63		11
Feb		68	131		9
Mar		52	183		13
Apr		53	236	695	9
May	75	59	295	679	16
Jun	56	66	361	689	22
Jul	56	79	440	712	22
Aug	64	75	515	723	18
Sep	53	71	586	741	18
Oct	53	74	660	762	16
Nov	52	56	716	766	15
Dec	50	43	759	759	13

## 5 Ton Equipments

5 Ton Truck				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		4	4	
Feb		6	10	
Mar		3	13	
Apr		5	18	64
May	3	2	20	63
Jun	2	6	26	67
Jul	6	5	31	66
Aug	8	6	37	64
Sep	5	10	47	69
Oct	11	11	58	69
Nov	6	3	61	66
Dec	5	9	70	70

## COLLATION TABLE FOR GRAPH No 4

5 Ton Dump Truck					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		13	13		
Feb		8	21		
Mar		6	27		
Apr		13	40	95	
May	2	21	61	114	
Jun	7	11	72	116	
Jul	8	13	85	123	
Aug	15	7	92	115	
Sep	7	5	97	106	
Oct	9	2	99	101	
Nov	2	1	100	105	
Dec	5	4	104	104	

L/ROVER - 2 1/2 TON IHC EQUIPMENTS

2 1/2 Ton Truck				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		6	6	
Feb		5	11	
Mar		7	18	
Apr		7	25	72
May	3	13	38	82
Jun	11	2	40	73
Jul	5	6	46	74
Aug	1	7	53	80
Sep	6	7	60	81
Oct	6	8	68	83
Nov	5	3	71	81
Dec	10	3	74	74

COLLATION TABLE FOR GRAPH No 4

L/Rover					
Mth	1969		1970		C/F to Next Mth
	This Mth	This Mth	Cum	MAT	
		<del>37</del>	<del>37</del>		
Jan		37	37		
Feb		23	60		
Mar		17	77		
Apr		28	105	285	
May	23	26	131	308	
Jun	19	27	158	314	
Jul	20	30	188	324	
Aug	18	47	235	353	
Sep	39	38	273	292	
Oct	19	32	305	331	
Nov	26	21	326	360	
Dec	34	23	349	349	

# FORKLIFT TRUCK EQUIPMENTS

COLLATION TABLE FOR GRAPH No 5

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		5	5	
Feb		8	13	
Mar		6	19	
Apr		5	24	42
May	Nil	5	29	47
Jun	6	6	35	47
Jul	2	7	42	52
Aug	1	1	43	52
Sep	2	7	50	57
Oct	Nil	1	51	58
Nov	3	3	54	58
Dec	4	1	55	55

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		5	5		Nil
Feb		7	12		1
Mar		6	18		1
Apr		4	22	40	2
May	Nil	6	28	46	1
Jun	4	6	34	48	1
Jul	2	5	39	51	3
Aug	3	3	42	51	1
Sep	1	6	48	56	2
Oct	1	2	50	57	1
Nov	3	2	52	56	2
Dec	4	3	55	55	Nil

# ELECTRICAL REQUISITIONS

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		72	72	
Feb		69	141	
Mar		58	199	
Apr		77	276	721
May	35	71	347	757
Jun	37	60	407	760
Jul	69	71	478	762
Aug	85	58	536	735
Sep	48	74	610	761
Oct	44	43	653	760
Nov	72	51	704	739
Dec	35	48	752	752

# COLLATION TABLE FOR GRAPH No

B

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		67	67		20
Feb		83	150		6
Mar		51	201		13
Apr		57	258	712	33
May	42	85	343	755	19
Jun	54	48	391	749	31
Jul	71	67	458	745	35
Aug	78	75	533	742	18
Sep	45	69	602	766	23
Oct	60	55	657	761	11
Nov	65	56	713	752	6
Dec	39	52	765	765	2

# SMALL ARMS

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		59	59	
Feb		94	153	
Mar		76	229	
Apr		90	319	892
May	48	115	434	959
Jun	70	52	486	941
Jul	56	70	556	955
Aug	55	64	620	964
Sep	112	58	678	910
Oct	46	58	736	922
Nov	92	56	792	886
Dec	94	31	823	823

# COLLATION TABLE FOR GRAPH No 7

COMPLETIONS					
Mth	1969		1970		C/F to Next Mth
	This Mth	This Mth	Cum	MAT	
Jan		57	57		5
Feb		97	154		2
Mar		76	230		2
Apr		86	316	909	6
May	56	117	433	970	4
Jun	57	52	485	965	4
Jul	56	68	553	977	6
Aug	65	67	620	979	3
Sep	71	57	677	965	4
Oct	61	58	735	962	4
Nov	110	59	794	911	1
Dec	117	31	825	825	1



# GENERAL ENGINEERING REQUISITIONS

COLLATION TABLE FOR GRAPH No 8

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		110	110	
Feb		79	189	
Mar		57	246	
Apr		82	328	1065
May	86	90	418	1069
Jun	82	59	477	1046
Jul	75	88	565	1059
Aug	80	85	650	1064
Sep	77	106	756	1093
Oct	89	78	834	1082
Nov	169	58	892	971
Dec	79	44	936	936

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		97	97		20
Feb		87	184		12
Mar		47	231		22
Apr		89	320	1077	15
May	97	83	403	1063	22
Jun	78	68	471	1053	13
Jul	90	75	546	1038	26
Aug	76	95	641	1057	16
Sep	73	106	747	1090	16
Oct	85	80	827	1085	14
Nov	178	62	889	969	10
Dec	80	43	932	932	11

# INSTRUMENT REQUISITIONS

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		131	131	
Feb		180	311	
Mar		169	480	
Apr		189	669	1608
May	149	229	898	1688
Jun	131	165	1063	1712
Jul	96	200	1263	1826
Aug	131	191	1454	1886
Sep	103	176	1630	1959
Oct	90	190	1820	2059
Nov	134	165	1985	2099
Dec	105	151	2136	2136

# COLLATION TABLE FOR GRAPH No 9

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		135	135		9
Feb		177	312		12
Mar		151	463		30
Apr		211	674	1629	8
May	162	222	896	1689	15
Jun	131	161	1057	1719	19
Jul	101	197	1254	1815	22
Aug	130	203	1457	1888	10
Sep	100	162	1619	1950	24
Oct	82	195	1814	2063	19
Nov	152	172	1986	2083	12
Dec	97	156	2142	2142	7

OFFICE MACHINES AND PROJECTOR EQUIP

COLLATION TABLE FOR GRAPH No 10

TYPEWRITERS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		6	6	
Feb		26	32	200
Mar	16	30	62	214
Apr	9	24	88	231
May	16	21	109	236
Jun	16	23	132	243
Jul	20	21	153	244
Aug	31	26	179	239
Sep	13	17	196	247
Oct	15	12	208	240
Nov	20	26	234	277
Dec	12	31	265	265

PROJECTORS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F t Next Mth
Jan		8	8		
Feb		4	12	62	
Mar	4	6	18	64	
Apr	5	9	27	68	
May	3	8	35	73	
Jun	5	10	45	78	
Jul	1	13	58	90	
Aug	1	5	63	94	
Sep	2	3	66	95	
Oct	6	15	81	104	
Nov	20	26	107	109	
Dec	3	13	120	120	

OFFICE MACHINES AND PROJECTOR EQPT

COLLATION TABLE FOR GRAPH No 10

OTHER OFFICE MACHINES				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		7	7	
Feb		4	11	47
Mar	8	5	16	44
Apr	4	7	23	67
May	4	3	26	46
Jun	0	3	29	49
Jul	1	10	39	58
Aug	3	8	47	63
Sep	5	5	52	63
Oct	5	8	60	66
Nov	5	13	73	74
Dec	1	7	80	80

Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

# WATCH AND COMPASS EQUIPMENTS

COLLATION TABLE FOR GRAPH No 11

WATCHES				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		33	33	
Feb		26	61	451
Mar	22	66	127	495
Apr	17	109	237	588
May	35	105	242	558
Jun	32	97	339	613
Jul	16	183	522	790
Aug	11	209	731	988
Sep	44	126	857	1070
Oct	56	173	1030	1187
Nov	80	107	1137	1214
Dec	77	102	1241	1241

COMPASSES					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		77	77		
Feb		88	168	530	
Mar	27	151	319	654	
Apr	47	90	409	697	
May	85	113	522	725	
Jun	77	60	582	708	
Jul	24	43	625	727	
Aug	62	77	702	742	
Sep	30	61	763	773	
Oct	0	80	843	843	
Nov	9	51	894	895	
Dec	1	48	942	942	

MISCELLANEOUS NON-OPTICAL EQPTS

COLLATION TABLE FOR GRAPH No 12

MISCELLANEOUS NON-OPTICAL				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		3	3	
Feb		6	9	81
Mar	2	23	32	102
Apr	5	12	44	109
May	11	24	68	122
Jun	2	11	79	131
Jul	6	15	94	140
Aug	15	16	110	141
Sep	9	16	126	148
Oct	10	3	129	141
Nov	7	25	154	159
Dec	5	7	161	161

Mth	1969	1970			
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

# BINOS AND Misc OPTICAL EQPTS

COLLATION TABLE FOR GRAPH No 13

BINOCULARS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		3	3	
Feb		3	6	244
Mar	11	6	12	239
Apr	18	12	24	233
May	27	12	36	168
Jun	24	4	40	148
Jul	18	16	56	146
Aug	14	8	64	140
Sep	2	19	83	157
Oct	0	13	96	170
Nov	53	14	110	131
Dec	21	14	124	124

MISC OPTICAL EQPT					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		23	23		
Feb		48	71	363	
Mar	30	20	91	353	
Apr	31	23	114	345	
May	31	52	166	366	
Jun	51	17	183	332	
Jul	33	27	210	326	
Aug	31	13	223	308	
Sep	19	14	237	303	
Oct	18	11	248	296	
Nov	16	13	261	293	
Dec	32	20	281	281	

# TELECOMMUNICATION REQUISITIONS

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		162	162	
Feb		211	373	
Mar		218	591	
Apr		217	808	2318
May	171	207	1015	2354
Jun	180	238	1253	2412
Jul	156	200	1453	2456
Aug	259	211	1664	2408
Sep	187	175	1839	2396
Oct	203	175	2014	2368
Nov	169	167	2181	2366
Dec	185	201	2382	2382

COLLATION TABLE FOR GRAPH No

14

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		165	165		7
Feb		201	366		17
Mar		219	585		16
Apr		214	799	2363	19
May	210	175	974	2328	51
Jun	165	275	1249	2438	14
Jul	177	194	1443	2455	20
Aug	260	208	1651	2403	23
Sep	182	191	1842	2412	7
Oct	203	176	2018	2385	6
Nov	188	165	2183	2362	8
Dec	179	174	2357	2357	35



RADIO SETS PRC 25 & RT 524

COLLATION TABLE FOR GRAPH No 15

PRC 25				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		22	22	
Feb		48	70	
Mar		57	127	
Apr		47	174	581
May	56	40	214	565
Jun	62	62	276	585
Jul	46	43	319	562
Aug	37	48	367	573
Sep	44	42	409	571
Oct	58	43	452	556
Nov	53	46	498	549
Dec	51	45	543	543

RT 524					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		4	4		
Feb		10	14		
Mar		14	28		
Apr		14	42	96	
May	15	14	56	95	
Jun	7	14	70	102	
Jul	4	15	85	113	
Aug	5	11	96	119	
Sep	6	9	105	122	
Oct	5	11	116	128	
Nov	5	11	127	134	
Dec	7	16	143	143	

# RADIO SETS B47 & C42

## COLLATION TABLE FOR GRAPH No 16

B47				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		4	4	
Feb		2	6	
Mar		4	10	
Apr		2	12	71
May	8	5	17	68
Jun	8	3	20	63
Jul	16	4	24	51
Aug	10	6	30	47
Sep	3	1	31	45
Oct	3	4	35	46
Nov	11	7	42	42
Dec	Nil	Nil	42	<del>42</del>

C42					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		6	6		
Feb		15	21		
Mar		9	30		
Apr		11	41	202	
May	23	15	56	194	
Jun	17	16	72	193	
Jul	30	6	78	169	
Aug	18	9	87	160	
Sep	21	10	97	149	
Oct	14	4	101	139	
Nov	20	7	108	126	
Dec	18	11	119	119	

# ALL EQPT REQUISITIONS

COLLATION TABLE FOR GRAPH No 17

ARISINGS				
Mth	1969		1970	
	This Mth	This Mth	Cum	MAT
Jan		613	613	
Feb		722	1335	
Mar		675	2010	
Apr		728	2738	7559
May	569	808	3546	7798
Jun	607	670	4216	7861
Jul	521	734	4950	8074
Aug	710	705	5655	8069
Sep	593	690	6345	8166
Oct	536	625	6970	8255
Nov	714	575	7545	8116
Dec	571	533	8078	8078

COMPLETIONS					
Mth	1969		1970		
	This Mth	This Mth	Cum	MAT	C/F to Next Mth
Jan		602	602		75
Feb		733	1335		64
Mar		636	1971		103
Apr		736	2707	7680	95
May	657	770	3477	7790	133
Jun	561	694	4171	7926	109
Jul	567	704	4875	8063	139
Aug	699	751	5626	8115	93
Sep	542	682	6308	8255	101
Oct	571	648	6956	8332	78
Nov	768	597	7553	8141	56
Dec	588	516	8069	8069	72