1988 ANNUAL REPORT

FORENSIC SCIENCE LABORATORY

118185

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC SAFETY

STATE POLICE FORENSIC SCIENCE LABORATORY

1988

ANNUAL REPORT

FORENSIC SCIENCE LABORATORY
MERIDEN, CT 06450

Telephone:
(203) 238-6324 / 238-6252

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INTRODUCTION

This is the first time an Annual Report has been prepared by the Connecticut State Police Forensic Science Laboratory. The primary objective of the report is to inform state and local law enforcement agencies as to the multi-facetted services which are available to them and also to recognize the accomplishments and activities of the laboratory staff for the calendar year of 1988.

HISTORICAL PERSPECTIVE

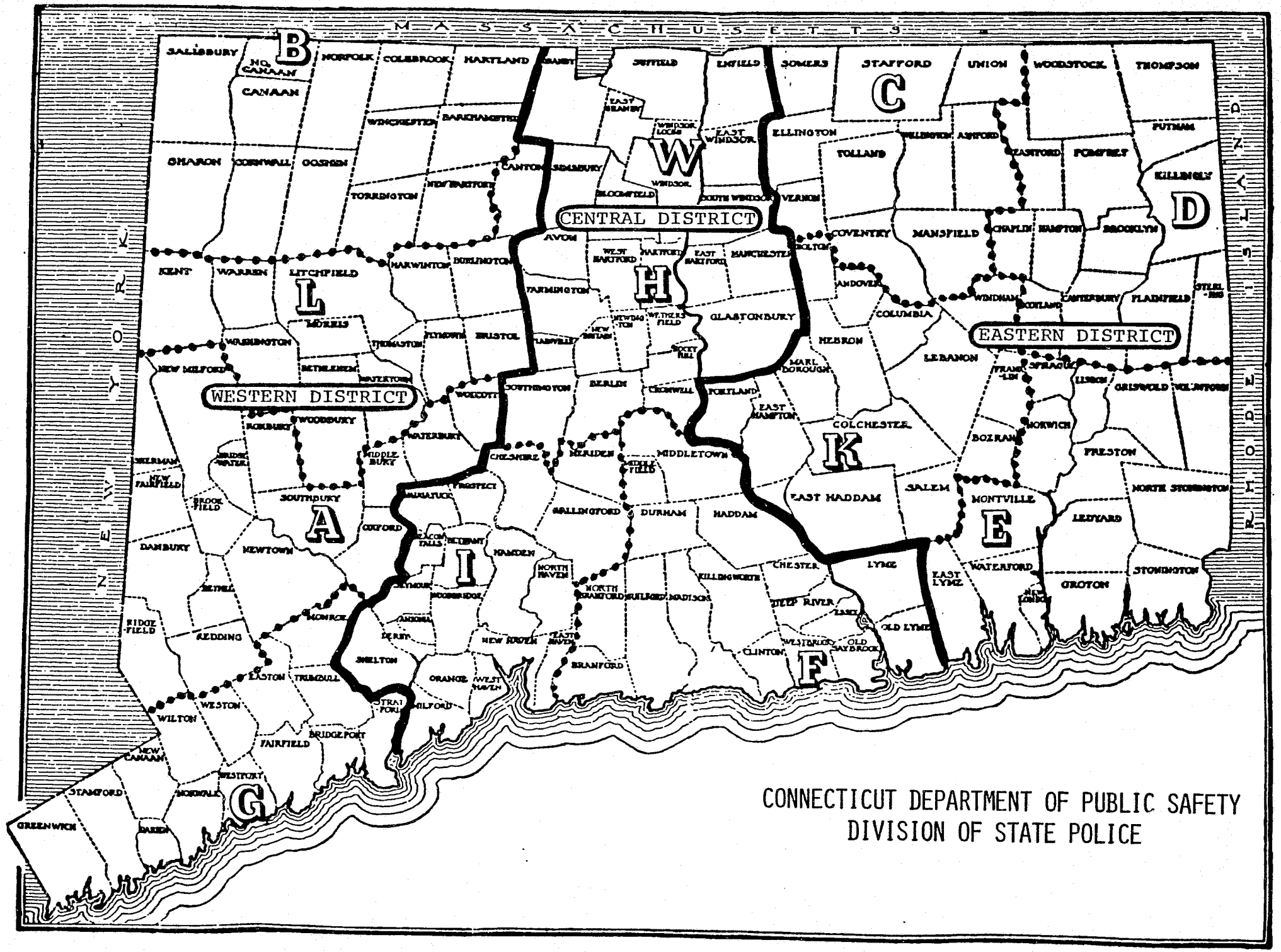
In 1935, Commissioner Anthony Sunderland established a Bureau of Identication within the State Police Department. A fingerprint file was created for major cases. Due to space constraints, the Bureau of Identification was moved to 100 Washington Street, Hartford, in 1938. A bill was enacted in 1941 by the State Legislature officially recognizing the State Bureau of Identication as an established state agency.

Under Commissioner Cleveland B. Fuessenich, the laboratory was relocated to the old State Police Academy building in Bethany to accommodate the needs of the submitting agencies across the state. It was Commissioner Fuessenich's thinking that Bethany was ideally situated because of its central location in the state. In 1975, the Crime Laboratory was made an independent unit under the auspices of the Connecticut State Police and was renamed the Forensic Science Laboratory (See Appendix 1,2).

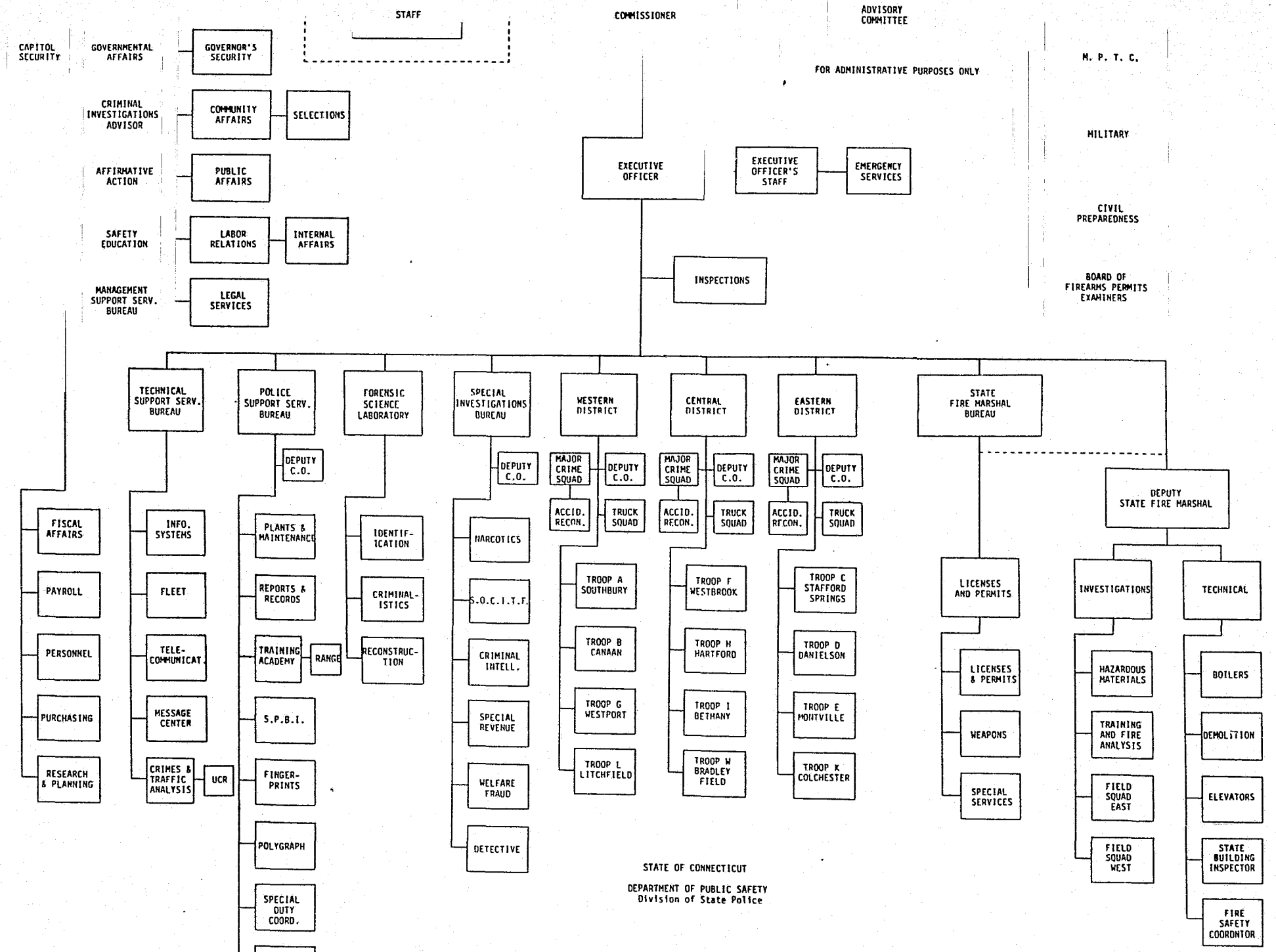
The appointment of Dr. Henry C. Lee as Chief Criminalist to the Forensic Science Laboratory was heralded as a keystone in the laboratory's evolution. He implemented state of the art techniques and procedures which thrust the laboratory to the forefront of modern forensic science and served notice to the forensic community that the Connecticut laboratory would soon be the sine qua non of forensic science.

The 80's brought further change to the Forensic Science Laboratory. The Bethany facility proved to be inadequate with the laboratory's acquisition of analytical instrumentation. A more suitable facility was sought which would allow for expansion. Subsequently the Forensic Science Laboratory was relocated to Building #10 of the Mulcahy Complex in Meriden, Connecticut.

To better serve the increasing demands of law enforcement agencies throughout the state, additional sections were added to the laboratory which required expertise in various scientific disciplines. The laboratory is presently staffed with 40 administrative and scientific personnel assigned to four sections consisting of thirteen units. Their functions are to provide investigative and professional leads through the timely examination of evidence, the reconstruction of crimes and expert testimony leading to the arrest, conviction or clearance of a suspect.

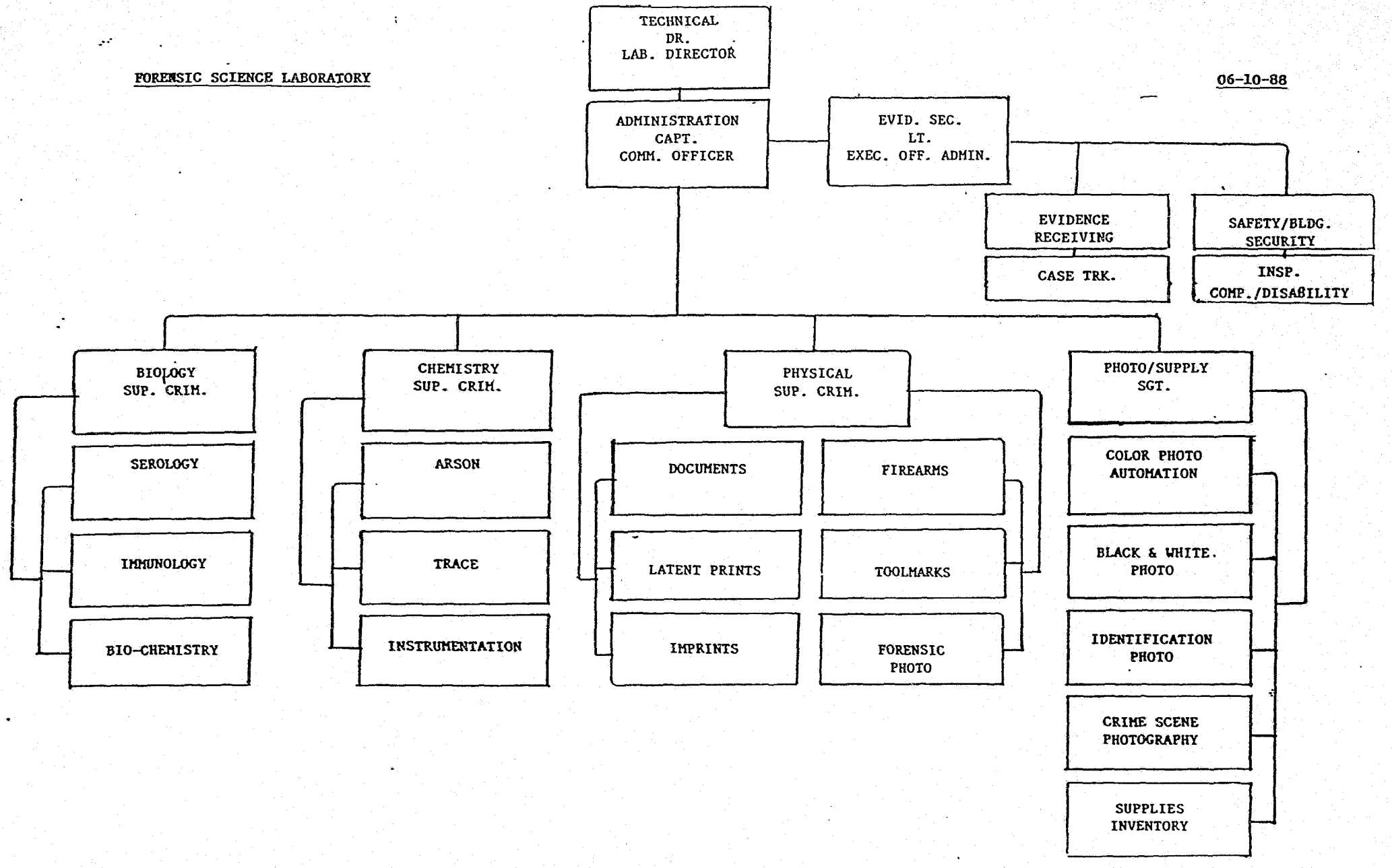


CONNECTICUT DEPARTMENT OF PUBLIC SAFETY
DIVISION OF STATE POLICE


STAFF
COMMISSIONER
ADVISORY COMMITTEE
FOR ADMINISTRATIVE PURPOSES ONLY
M. P. T. C.
MILITARY
CIVIL PREPAREDNESS
BOARD OF FIREARMS PERMITS EXAMINERS
CAPITOL SECURITY
GOVERNMENTAL AFFAIRS
GOVERNOR'S SECURITY
CRIMINAL INVESTIGATIONS ADVISOR
COMMUNITY AFFAIRS
SELECTIONS
AFFIRMATIVE ACTION
PUBLIC AFFAIRS
SAFETY EDUCATION
LABOR RELATIONS
INTERNAL AFFAIRS
MANAGEMENT SUPPORT SERV. BUREAU
LEGAL SERVICES
EXECUTIVE OFFICER
EXECUTIVE OFFICER'S STAFF
EMERGENCY SERVICES
INSPECTIONS
TECHNICAL SUPPORT SERV. BUREAU
POLICE SUPPORT SERV. BUREAU
FORENSIC SCIENCE LABORATORY
SPECIAL INVESTIGATIONS BUREAU
WESTERN DISTRICT
CENTRAL DISTRICT
EASTERN DISTRICT
STATE FIRE MARSHAL BUREAU
FISCAL AFFAIRS
PAYROLL
PERSONNEL
PURCHASING
RESEARCH & PLANNING
INFO. SYSTEMS
FLEET
TELE-COMMUNICAT.
MESSAGE CENTER
CRIMES & TRAFFIC ANALYSIS
UCR
DEPUTY C.O.
PLANTS & MAINTENANCE
REPORTS & RECORDS
TRAINING ACADEMY
RANGE
S.P.B.I.
FINGER-PRINTS
POLYGRAPH
SPECIAL DUTY COORD.
AUXILIARY COORD.
IDENTIF-ICATION
CRIMINAL-ISTICS
RECONSTRUC-TION
DEPUTY C.O.
NARCOTICS
S.O.C.I.T.F.
CRIMINAL INTELL.
SPECIAL REVENUE
WELFARE FRAUD
DETECTIVE
MAJOR CRIME SQUAD
DEPUTY C.O.
ACCID. RECON.
TRUCK SQUAD
TROOP A SOUTHBURY
TROOP B CANAAN
TROOP G WESTPORT
TROOP L LITCHFIELD
TROOP F WESTBROOK
TROOP H HARTFORD
TROOP I BETHANY
TROOP W BRADLEY FIELD
TROOP C STAFFORD SPRINGS
TROOP D DANIELSON
TROOP E MONTVILLE
TROOP K COLCHESTER
DEPUTY STATE FIRE MARSHAL
LICENSES AND PERMITS
LICENSES & PERMITS
WEAPONS
SPECIAL SERVICES
INVESTIGATIONS
HAZARDOUS MATERIALS
TRAINING AND FIRE ANALYSIS
FIELD SQUAD EAST
FIELD SQUAD WEST
TECHNICAL
BOILERS
DEMOLITION
ELEVATORS
STATE BUILDING INSPECTOR
FIRE SAFETY COORDNTOR
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
Division of State Police

FORENSIC SCIENCE LABORATORY

06-10-88



Substitute House Bill No. 5146

Public Act No. 83-66

AN ACT CONCERNING THE STATE POLICE FORENSIC SCIENCE LABORATORY

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (NEW) (a) The unit in the division of state police within the department of public safety known as the forensic science laboratory shall be maintained and operated to provide technical assistance to law enforcement agencies in the various areas of scientific investigation. The laboratory shall maintain facilities and services for the examination and analysis of evidentiary materials in areas including, but not limited to, chemistry, arson, firearms, questioned documents, microscopy, serology, trace evidence, latent fingerprints, impression and other similar technology.

(b) The laboratory: (1) May investigate any physical evidence or evidentiary material related to a crime upon the request of any federal, state or local agency, (2) may conduct or assist in the scientific field investigation at the scene of a crime and provide other technical assistance and training in the various fields of scientific criminal investigation upon request, (3) shall assure the safe custody of evidence during examination, (4) shall forward a written report of the results of an examination of evidence to the agency submitting such evidence, (5) shall render expert court testimony when requested, and (6) shall conduct ongoing research in the areas of the forensic sciences. The laboratory head shall be in charge of laboratory operations and shall establish and maintain a system of case priorities.

Laboratory Staff 1988

Administration

Henry C. Lee Ph.D
Director/Chief Criminalist

Capt. Michael Bochicchio M.P.A.
Commanding Officer

Lt. Lawrence Merrill
Executive Officer

Sgt. Robert J. Mills M.S.
Administrative Sergeant

Clerical Staff

Barbara Martin A.S.(L.A.)
Executive Secretary

Melissa Lohr
Senior Clerk

Diana Howard
Senior Clerk

Technical Staff

Criminalistics

Elaine Pagliaro M.S.
Supervising Criminalist
Criminalistics

Fred Ruszala Ph.D
Supervising Criminalist
Chemistry/Instrumentation

Deborah Messina M.S.
Lead Criminalist
Instrumentation

Jack Hubball Ph.D
Lead Criminalist
Chemistry

Kiti Settachatgul M.S.
Lead Criminalist
Trace

Beryl Novitch M.S.
Lead Criminalist
Serology

Mary Beth Guman M.S.
Lead Criminalist
Serology

Joy Carroll Reho M.S.
Lead Criminalist
Serology

Daniel Tramontozzi B.S.
Criminalist
Serology

William Paetzold M.S.
Criminalist
Chemistry

Katherine Bombara M.S.
Criminalist
Serology

Bradley Olson M.S.
Criminalist
Trace

Robert O'Brien M.S.
Criminalist
Instrumentation

Karen Roncarti B.S.
Criminalist
Serology

Patricia Johannes B.S.
Criminalist
Instrumentaton

Identification

William Duane B.A.
Supervising Criminilist
Documents

Kenneth Zercie M.S.
Lead Criminalist
Documents/Imprints

Robert Finkle
Lead Criminalist
Latent Prints

Thomas O'Brien A.S.
Criminalist
Latent Prints/Video

George Horan M.S.
Criminalist
Documents/Imprints

TFC Robert Hathaway A.S.
Senior Firearms Examiner
Firearms

Ed McPhillips B.A.
Lead Criminalist
Toolmarks/Firearms

TFC David Gibbs B.S.
Firearms Examiner
Firearms

Diana Benken M.S.
Criminalist
Latent Prints

Photography

Anthony Gura A.S.
Specialized Photographer
Color Photography

Theodore Yarusewicz
Specialized Photographer
Color Photography

Paul Hebert
Specialized Photogrpaher
B/W Reprint Photography

Stanley Zaniewski
Specialized Photographer
B/W Forensic Photography

Det. Leo Blanchette
Specialized Photographer
Color Photography

Joe Weronik
Specialized Photographer
Color Photography

FORENSIC SCIENCE LABORATORY CASE STATISTICS

Over 9,000 cases were submitted to the Forensic Science Laboratory in 1988 compared with 8,281 cases in 1987. This represents a 10% increase in case submissions. The following graphs illustrate monthly case submissions.

Graph #1 - Total Case Submissions (excluding photography).

Graph #2 - Evidentiary Submissions.

Graph #3 - State Police vs Local/Municipal Submissions

Graph #4 - Homicide Submissions

Graph #5 - Sexual Assaults

Graph #6 - Robbery Submissions

Graph #7 - Assault Submissions

Graph #8 - Burglary Submissions

Graph #9 - Larceny Submissions

Graph #10 - Arson Submissions

Graph #11 - Forgery Submissions

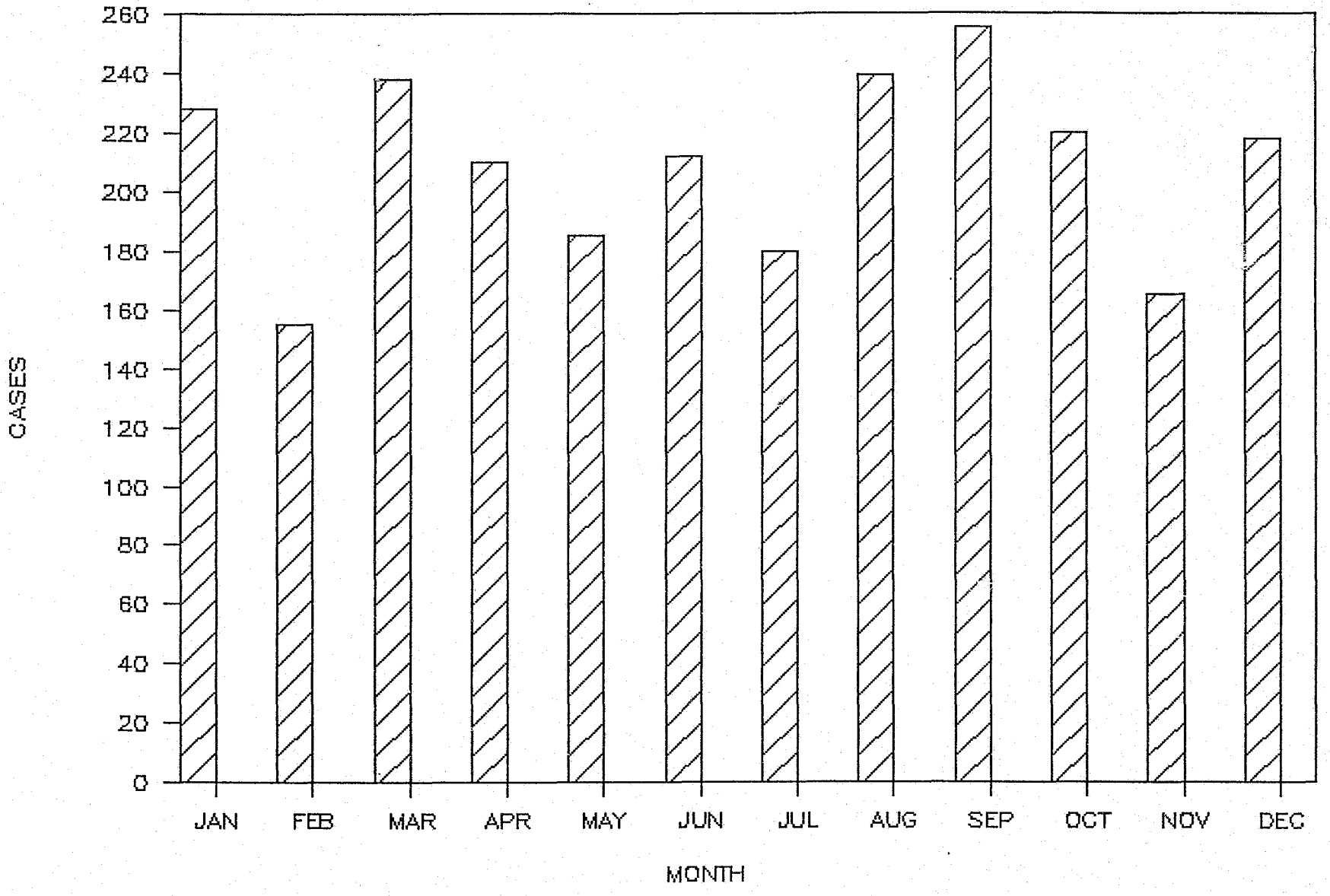
Graph #12 - Narcotics Related Submissions

Graph #13 - Motor Vehicle Submissions

Graph #14 - All Other Submissions

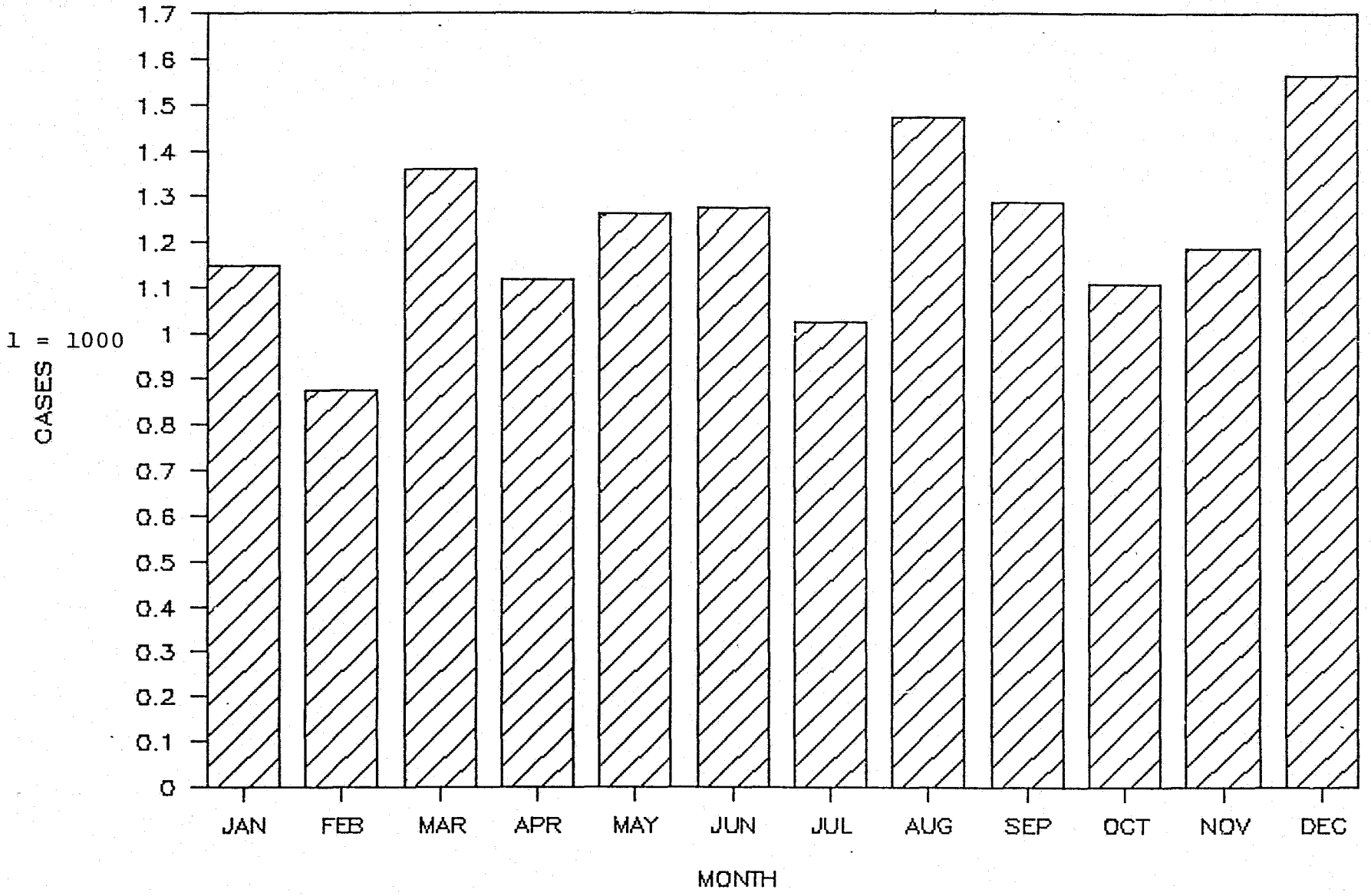
GRAPH # 1

1988 OVERALL CASE SUBMISSIONS



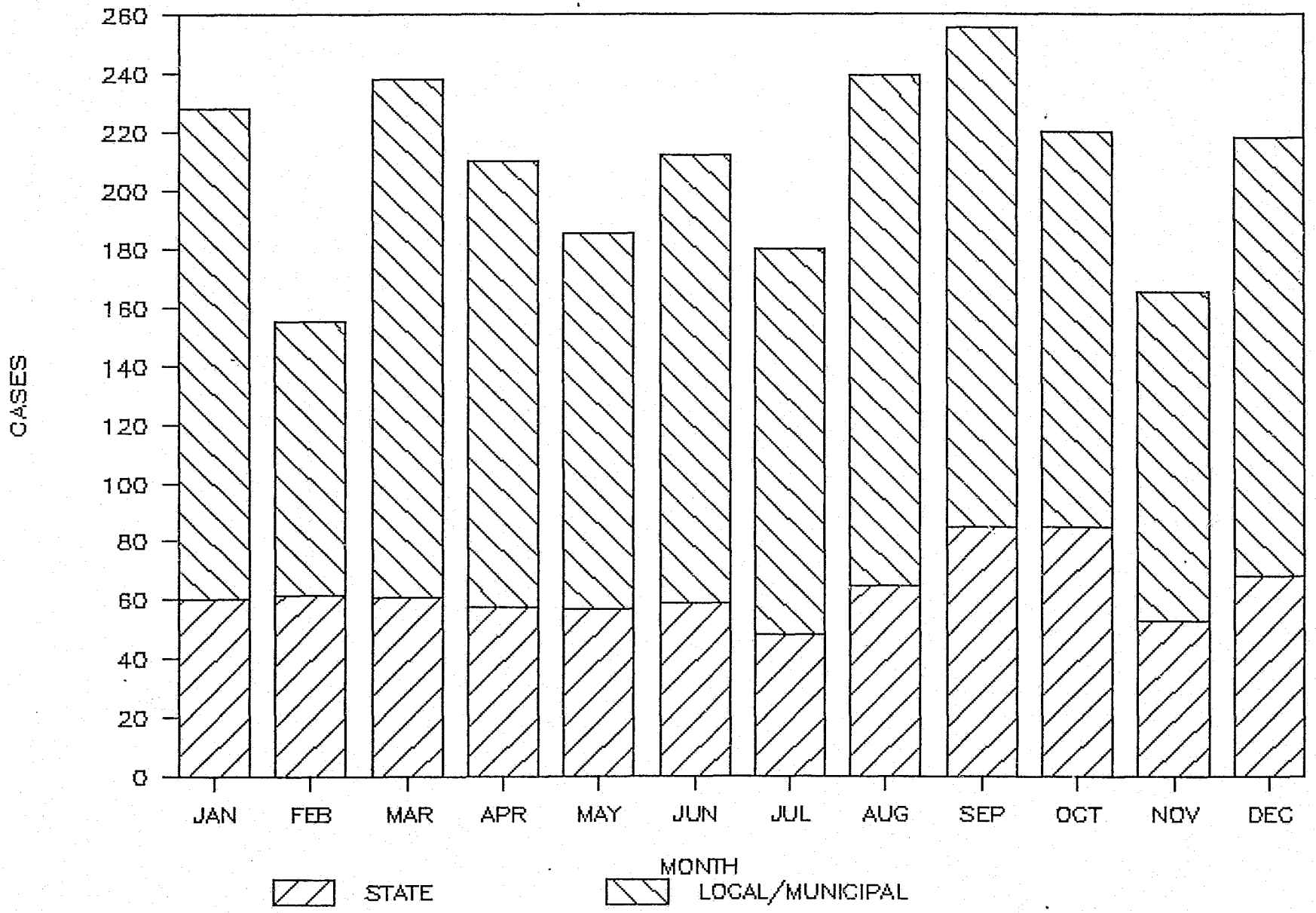
1988 EVIDENTIARY SUBMISSIONS

GRAPH # 2

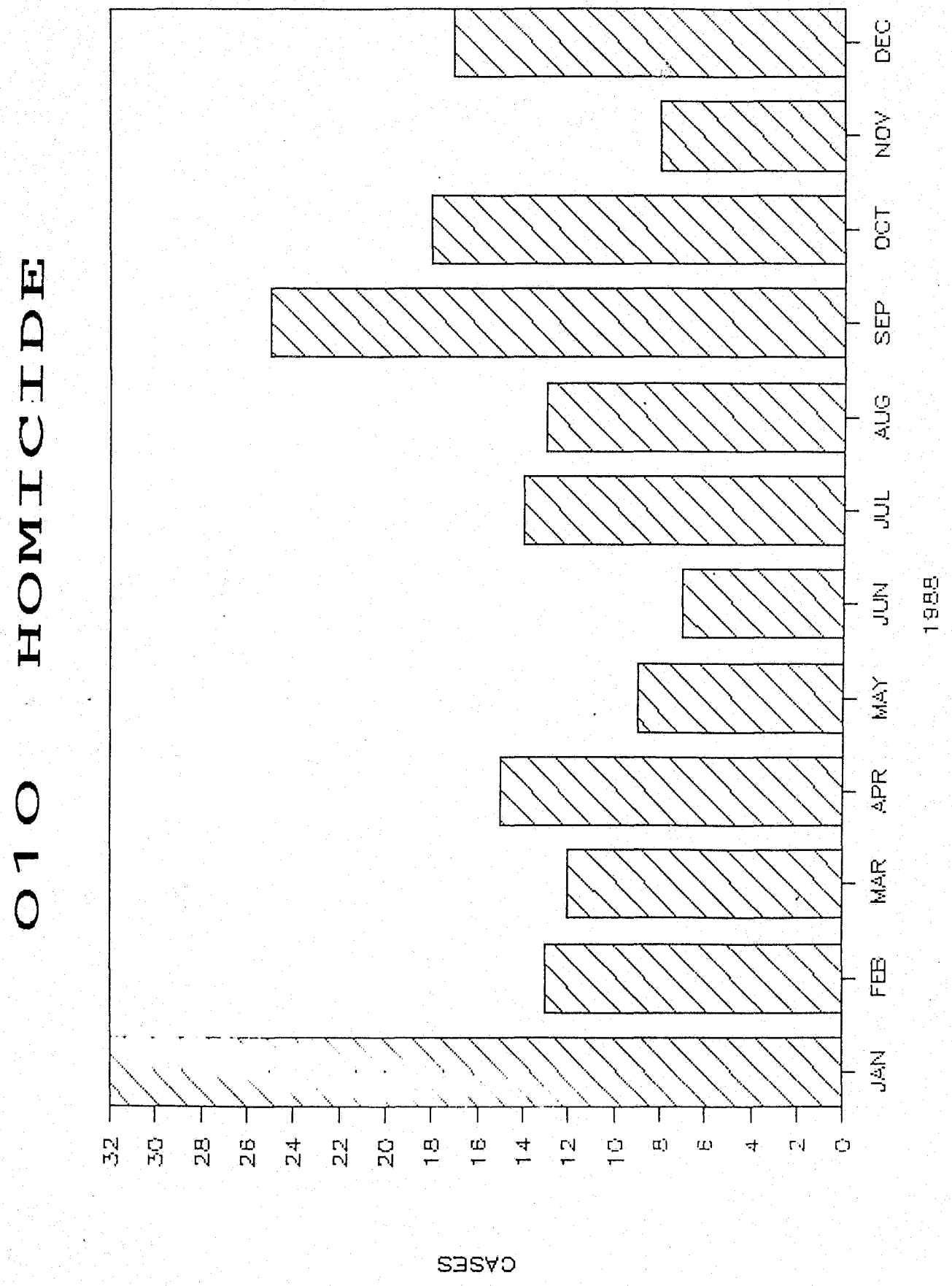


GRAPH # 3

1988 CASE SUBMISSIONS

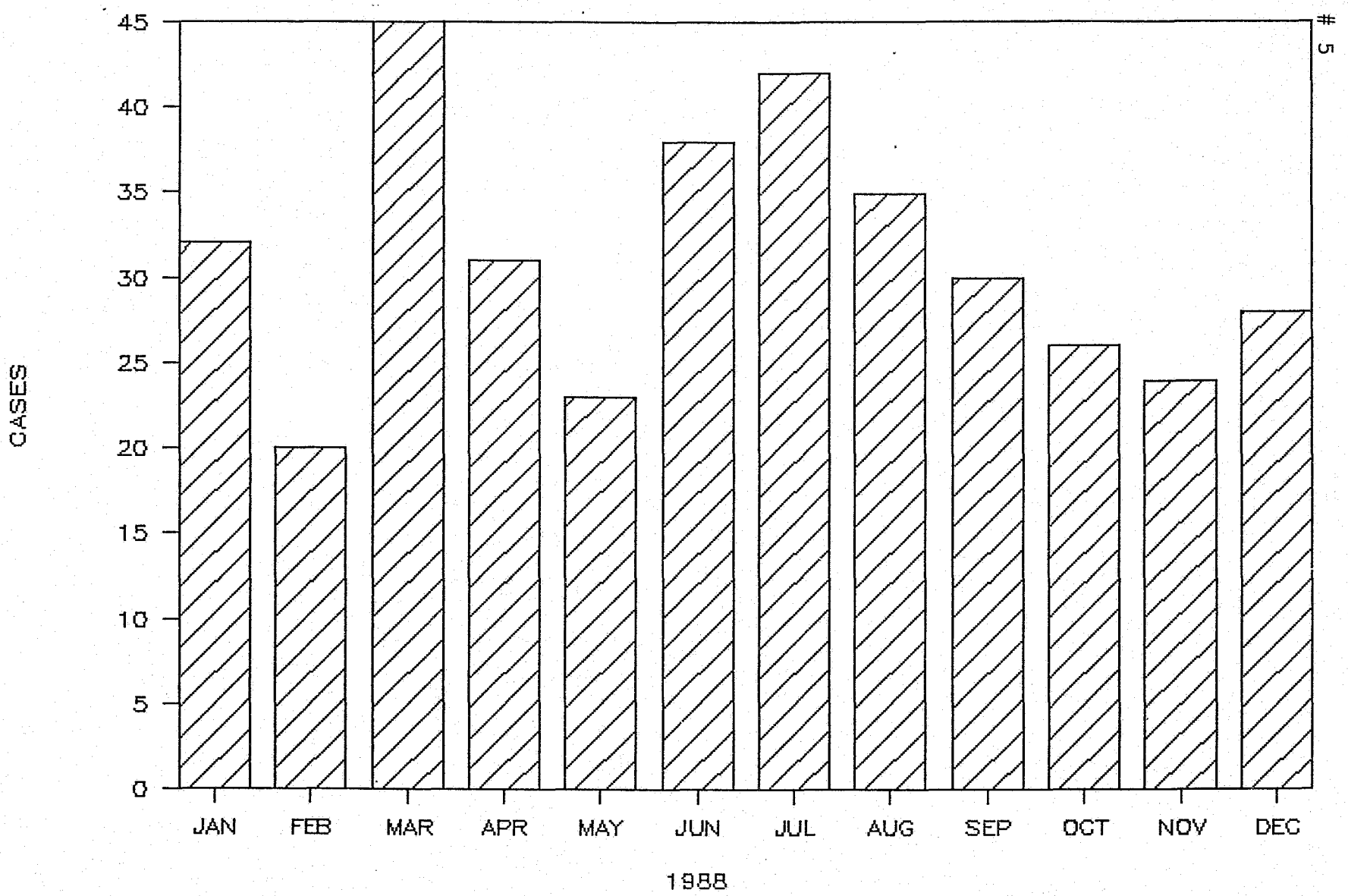


GRAPH # 4


010 HOMICIDE
CASES
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
1988

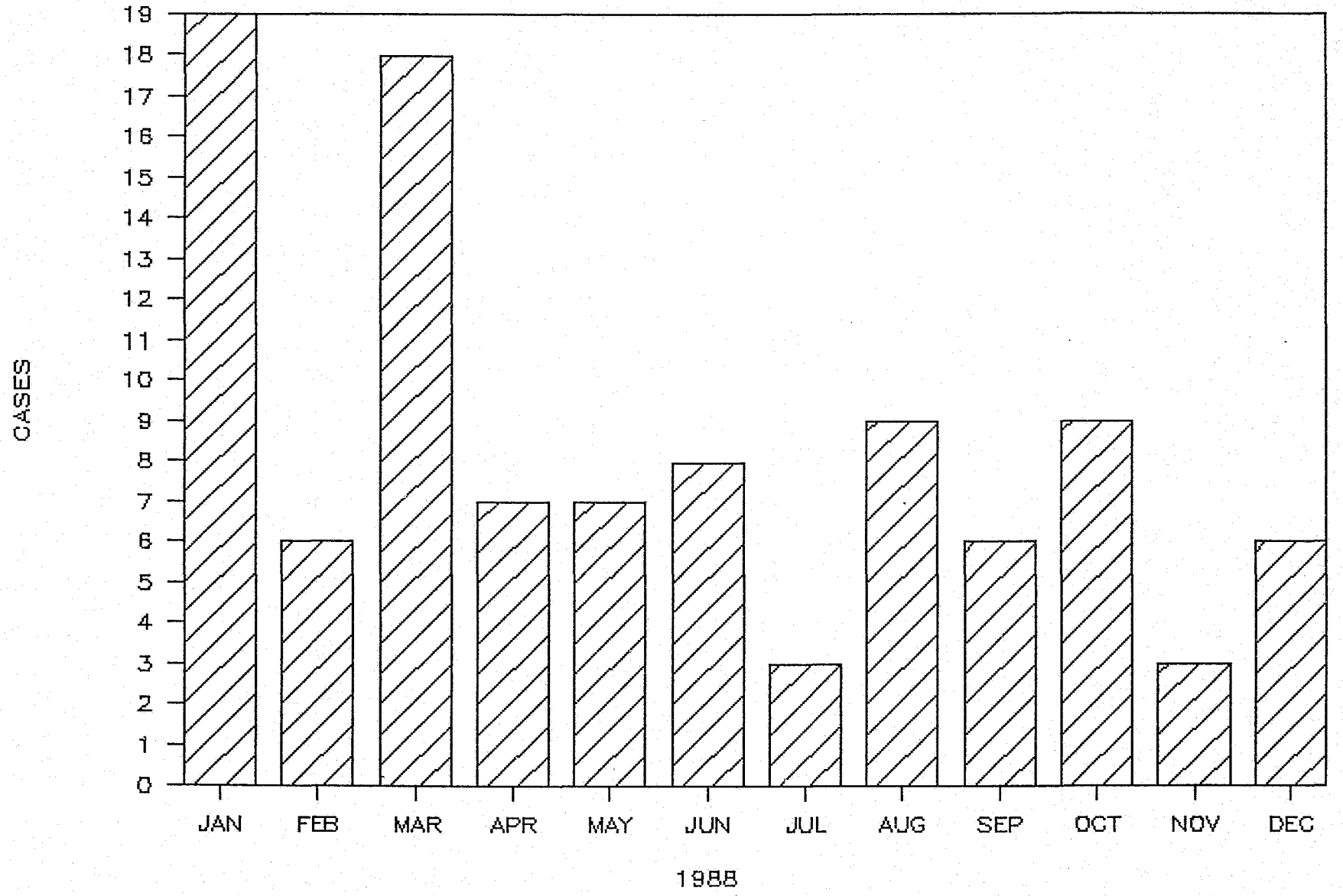
GRAPH # 5

020 SEXUAL ASSAULT



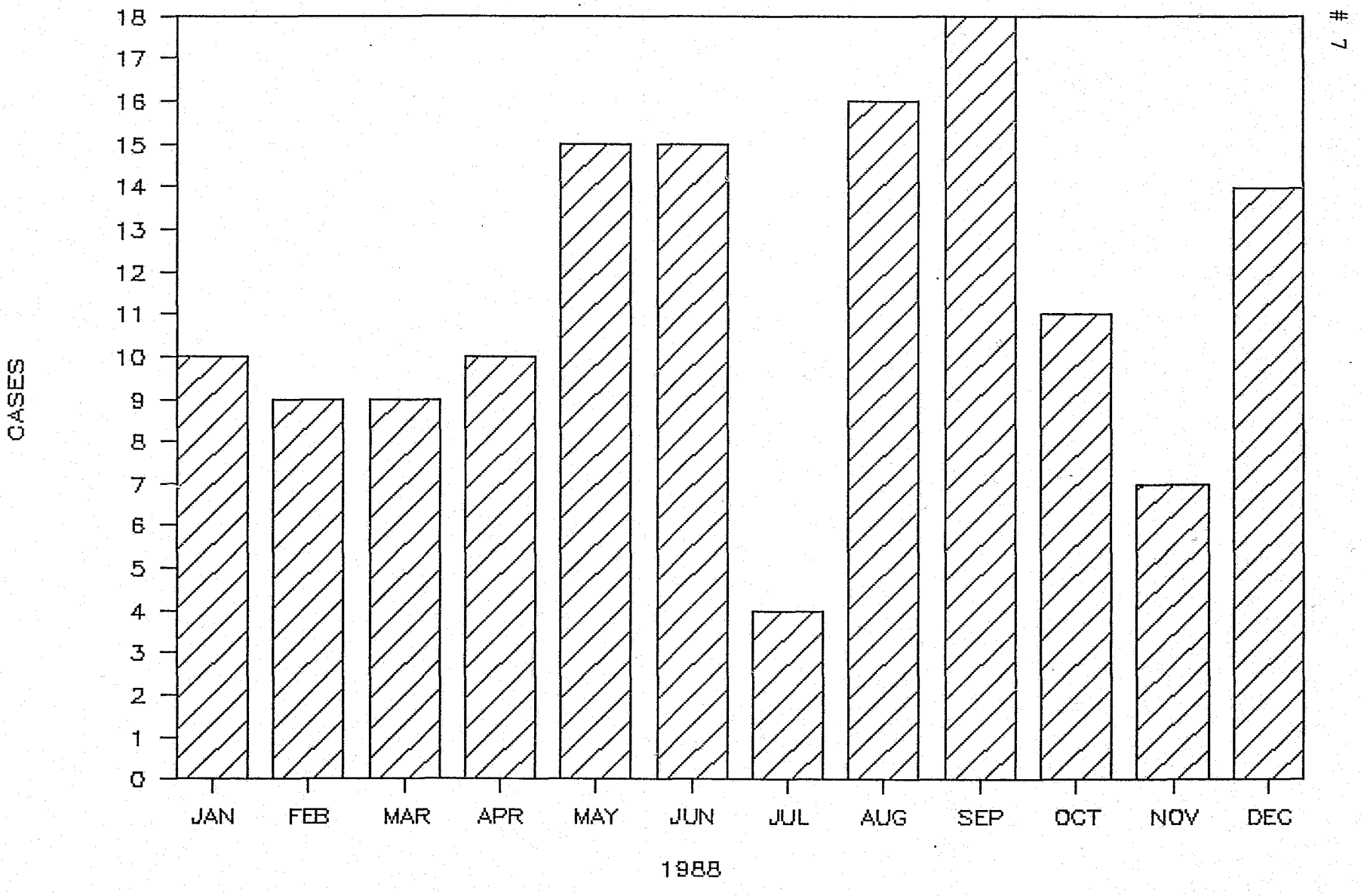
GRAPH # 6

030 ROBBERY



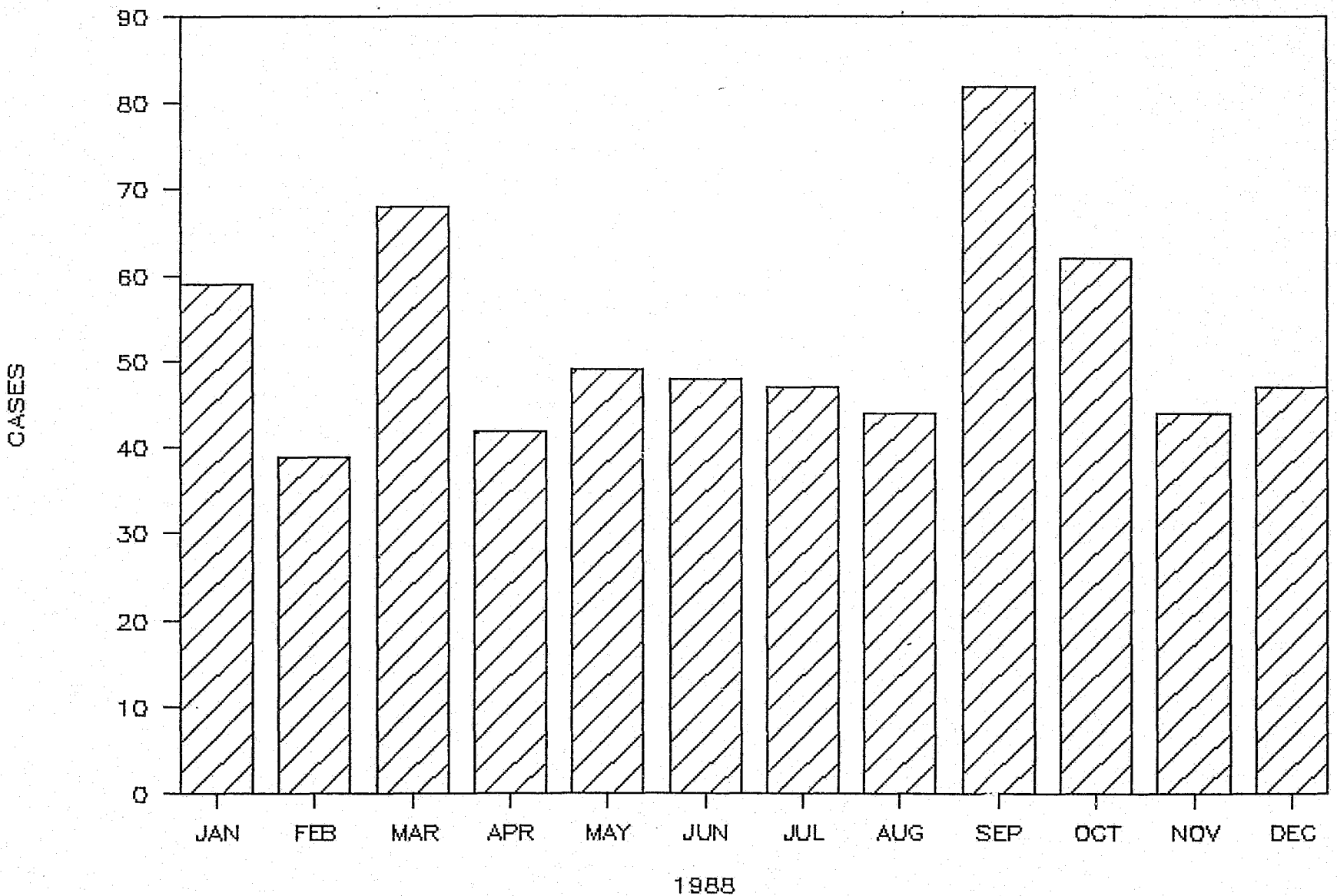
GRAPH # 7

040 ASSAULT.



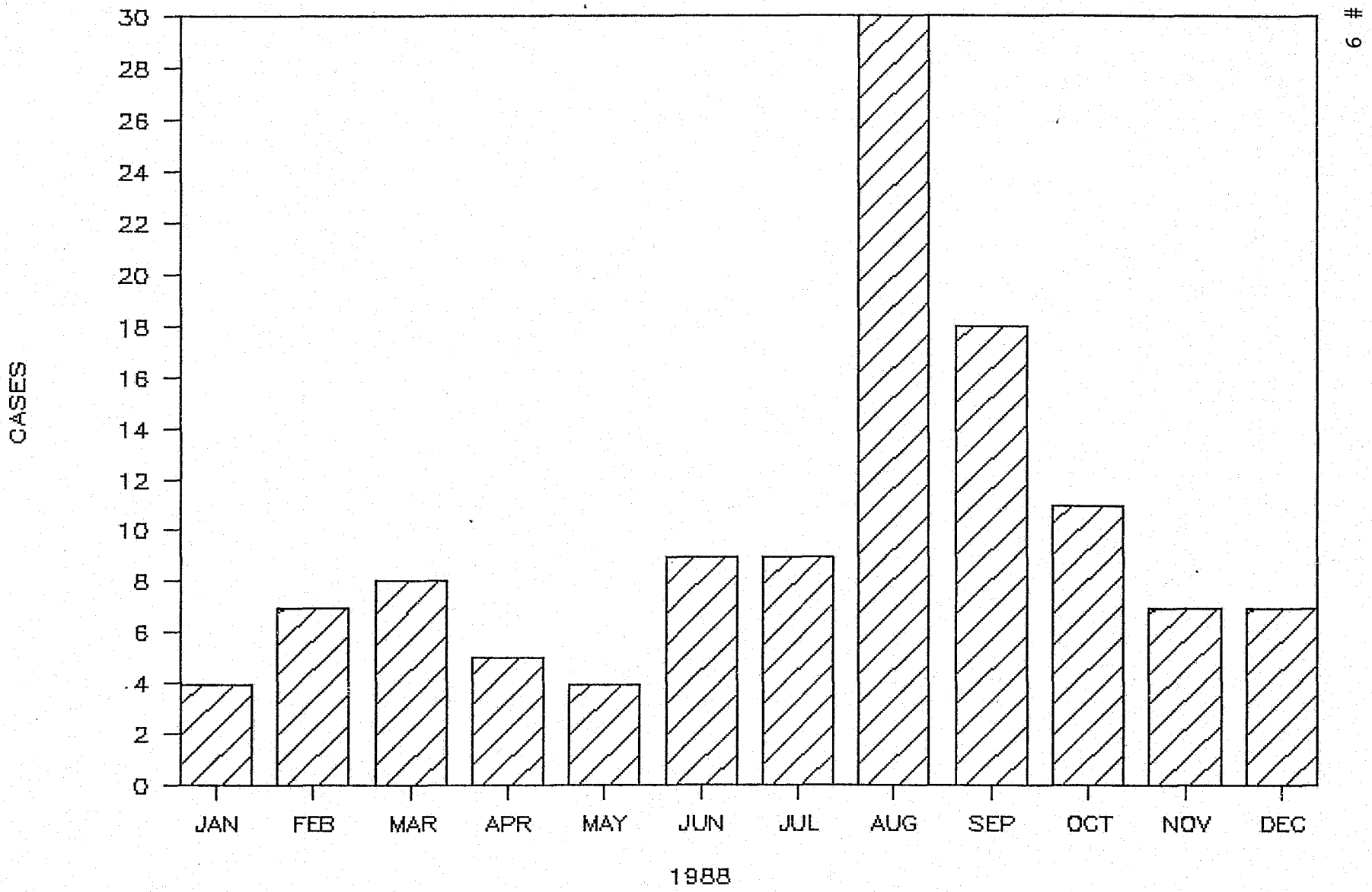
GRAPH # 8

050 BURGLARY



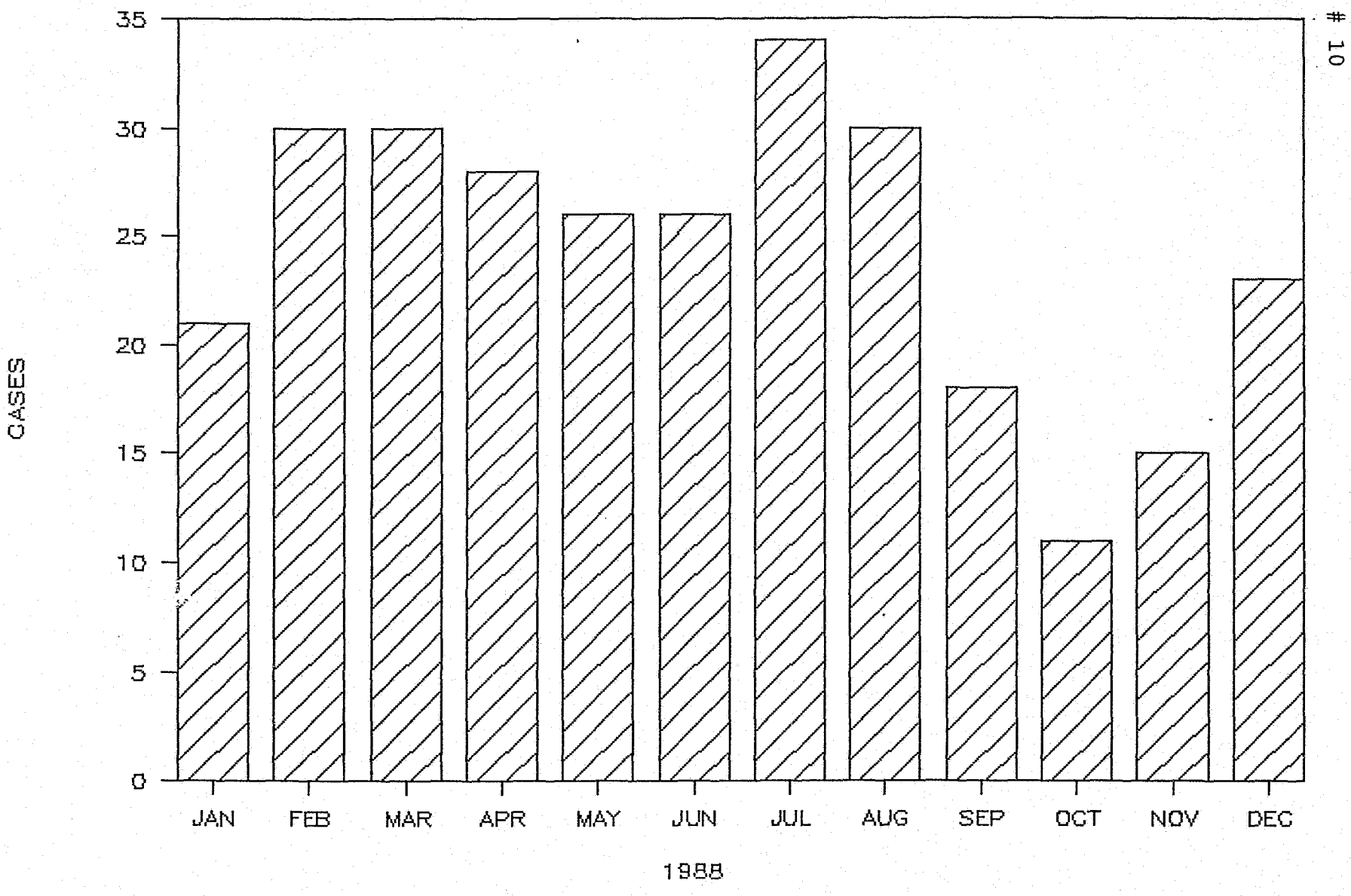
GRAPH # 9

060 LARCENY



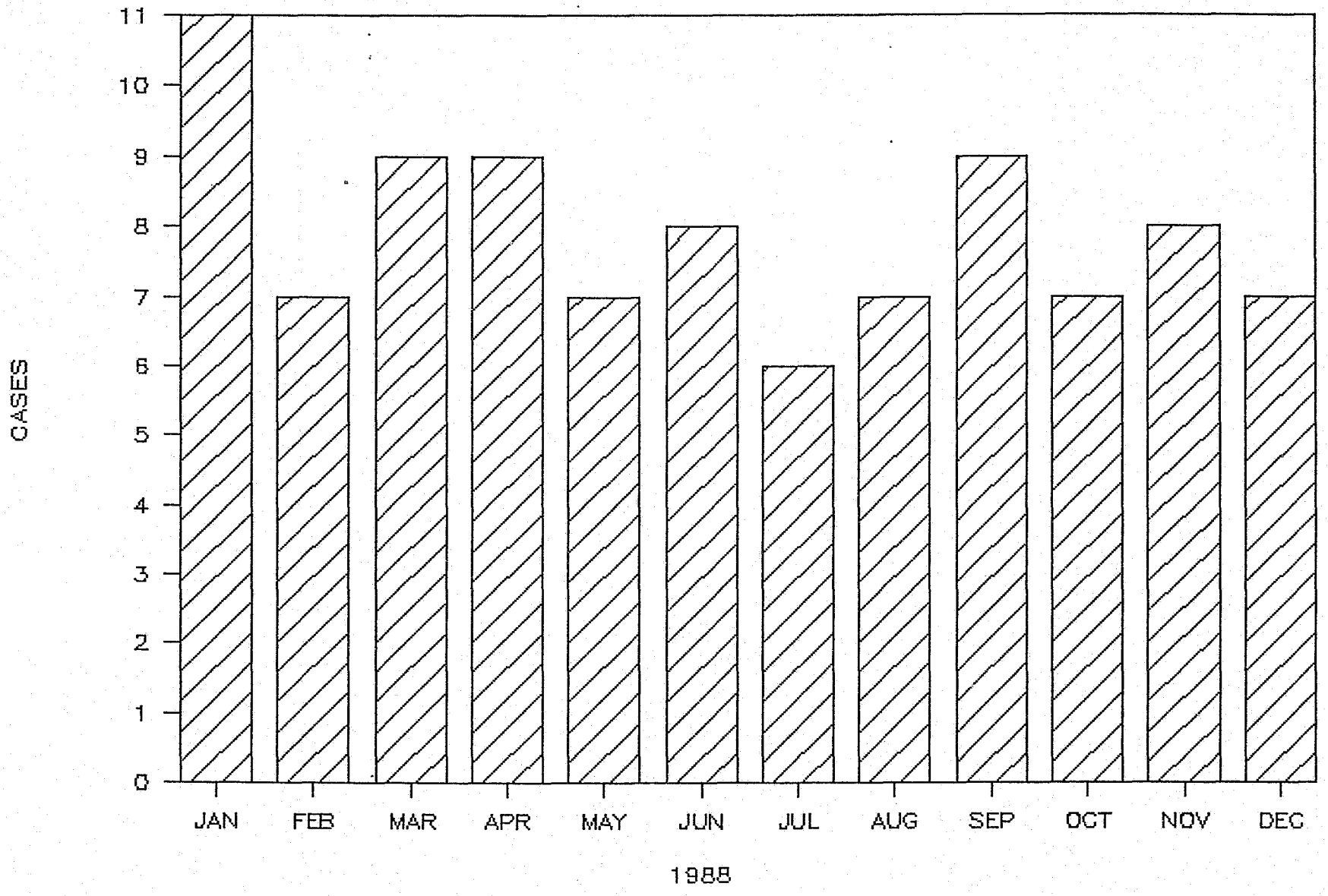
GRAPH # 10

090 ARSON



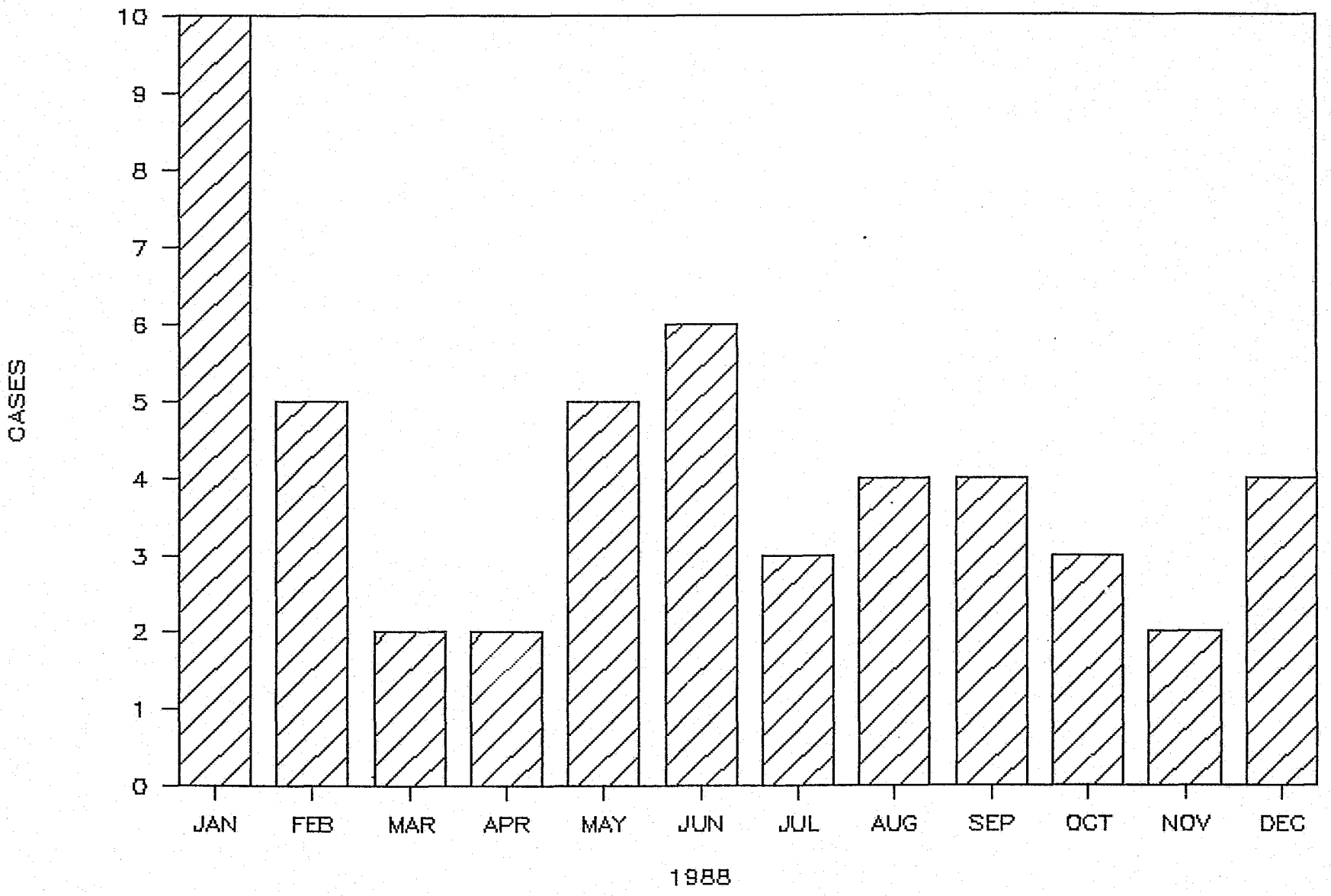
GRAPH # 11

100 FORGERY



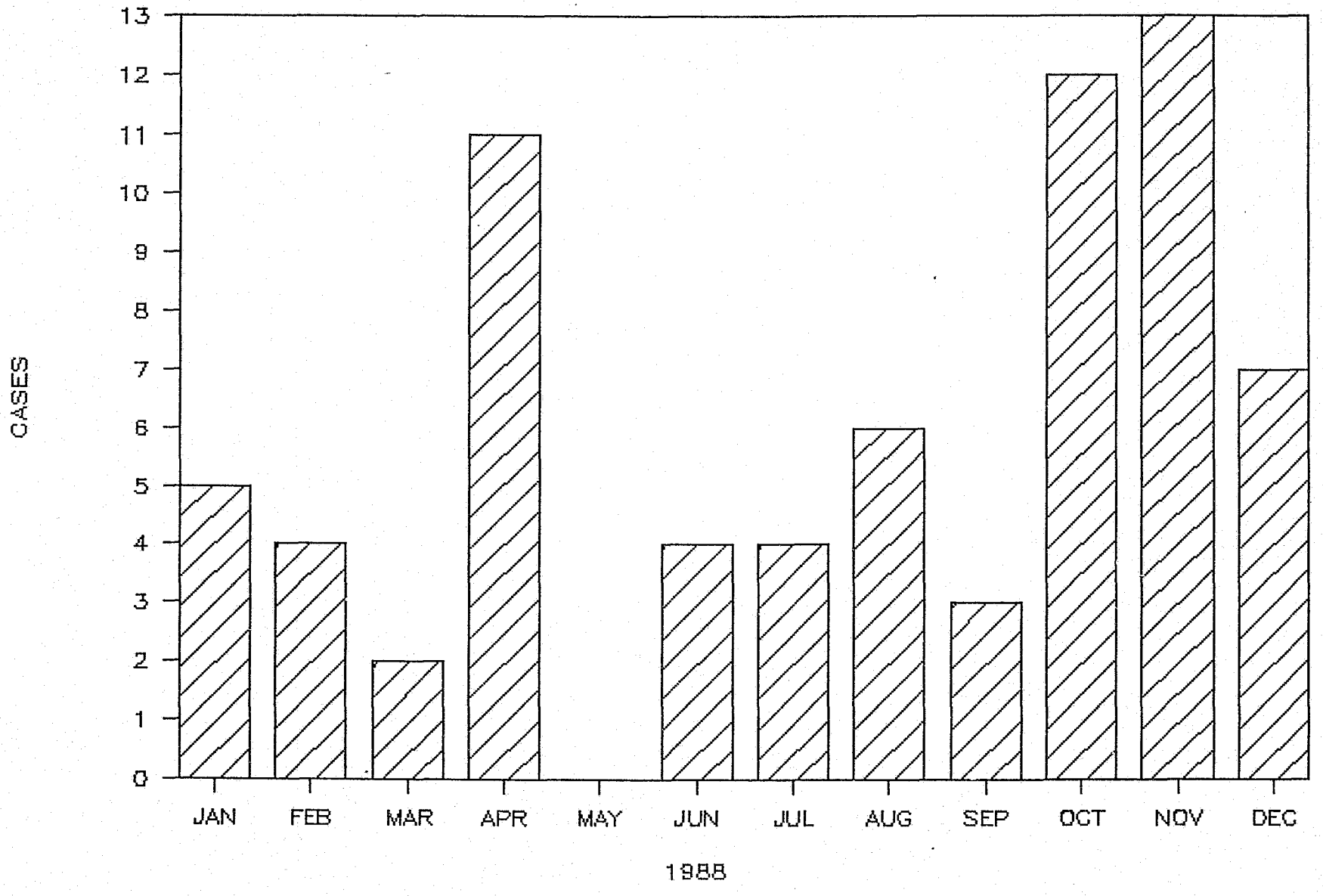
GRAPH # 12

180 NARCOTICS



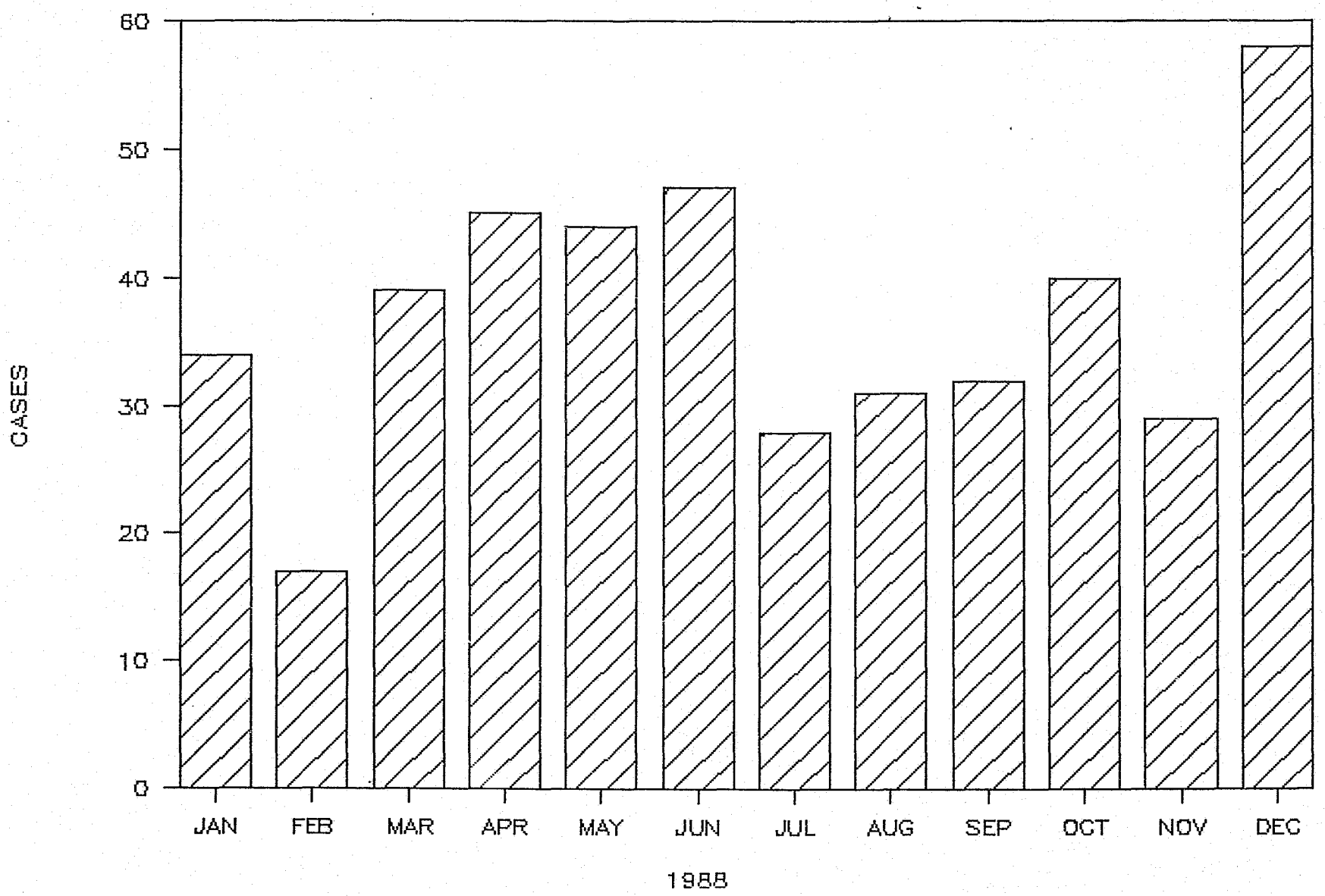
GRAPH # 13

999 MOTOR VEHICLE



GRAPH # 14

260 OTHER



COURT APPEARANCES

Many cases that are submitted to the Forensic Science Laboratory ultimately end up being adjudicated. This often requires expert testimony from the laboratory's qualified technical staff. The year 1988 was quite busy for laboratory personnel. Many found themselves appearing on the witness stand, often in well publicized criminal cases. Figure # 1 lists the judicial G.A.'s and the type of cases that laboratory personnel testified on in 1988. Appendix 3 depicts a geographical map of the 169 towns and cities of Connecticut. Figure # 2 lists the number of times each person testified in Connecticut.

Figure # 1

Type Of Crime

Jurisdiction	H	As	SA	R	Ar	MV	N	F	K
Bridgeport	19	5	2	0	0	1	0	2	0
Bristol	0	0	0	0	0	1	0	0	0
Hartford	28	0	1	0	0	0	7	1	0
Litchfield	1	0	0	0	0	0	0	0	0
Middletown	0	0	2	0	0	0	0	0	0
Montville	1	0	0	0	0	0	0	0	0
New Haven	12	1	3	0	0	0	0	2	0
New London	17	0	2	0	0	0	3	0	0
Norwalk	0	1	0	0	0	1	0	1	0
Rockville	0	0	1	0	0	0	0	0	0
Stamford	7	0	0	1	0	0	0	0	0
Waterbury	3	0	0	0	0	0	0	0	0
Out of State	14	0	0	0	0	0	0	0	1

Key: H=Homicide, As=Assault, SA=Sexual Assault, R=Robbery, Ar=Arson, MV=Motor Vehicle, N=Narcotics, F=Fraud and K=Kidnapping.

Figure # 2

Laboratory Personel	# of times testified in 1988
William Duane	9
Robert Finkle	8
David Gibbs	17
Marybeth Guman	5
Robert Hathaway	8
Henry Lee	53
Edward McPhillips	9
Lawrence Merrill	2
Deborah Messina	11
Beryl Novitch	7
Robert O'Brien	6
Thomas O'Brien	8
Bradley Olsen	7
William Paetzold	3
Elaine Pagliaro	8
Joy Carroll Reho	3
Ferdinand Ruszala	4
Kiti Settachatgul	6
Stanley Zaniewski	1
Kenneth Zercie	8

TRAINING RECEIVED BY STAFF

Many of the Forensic Laboratory's technical staff attended specialized courses, seminars and conferences in 1988 to keep abreast of the ever expanding forensic science field. The purpose of attending these courses and seminars was to learn new techniques and procedures which would enable the Forensic Science Laboratory's technical staff to better assist the law enforcement agencies in fighting crime. To show the dedication of the Forensic Science Laboratory's staff, many of the individuals who attended these courses and seminars used their own time and were not compensated for the expenses accrued. Following is a list of the courses and conferences attended by the technical staff;

Course/Seminar/Conference	Attendees
American Acadamy of Forensic Science Philadelphia, Pa. 2/16/88-2/20/88	Dr.Lee, K.Bombara, W.Duane, K.Roncarti, M.Guman, J.Reho, B.Olson, K.Settachatgual, G.Horan, W.Paetzold, R.O'Brien, E.Pagliaro, D.Messina, R.Mills, and B.Novitch
I.A.I. Tri-State Conference Grossinger, N.Y. 2/21/88-2/25/88	T.O'Brien, R.Finkle and K.Zercie
Pittsburgh Conference New Orleans, La. 2/20/88-2/26/88	J.Hubball
FBI Adv.Latent Print Exam. Quantico, Va. 1/23/88-2/14/88	D.Benken
DNA Mapping Workshop University of New Haven 2/23/88-2/25/88	D.Tramontozzi, J.Reho, E.Pagliaro, B.Novitch, M.Guman and K.Bombara
Wood Identification Workshop University of Massachusetts 6/7/88-6/10/88	B.Olson
A.F.T.M.E. Chicago, Illinois 6/12/88-6/17/88	D.Gibbs
Isoelectric Focusing Columbus, Ohio 6/12/88-6/17/88	K.Roncarti

FBI Hair and Fiber Course Quantico, Va. 6/12/88-6/24/88	B.Olson
I.A.I. Training Seminar Sacramento, Ca 7/02/88-7/08/88	K.Zercie
Scanning Electron Microscopy School Bedford, Mass 7/12/88-7/15/88	R.O'Brien
Crime Lab Development Baltimore, Marlyland 9/06/88-9/10/88	Dr.Lee, Capt.Bochicchio
N.E.A.F.S. Annual Meeting Mystic, CT 10/21/88-10/22/88	Criminalistics section of the laboratory
Crime Scene Reconstruction Workshop Mystic, CT 10/20/88-10/21/88	P.Johannes, K.Roncarti
AIDS Awareness Workshop Hartford, CT 7/19/88	B.Novitch, K.Roncarti, E.Pagliaro, M.Guman

MISCELLANEOUS

The laboratory staff is quite active in offering lectures and presentations to schools, colleges and professional organizations informing individuals as to the services which the Laboratory provides and encouraging interest in this discipline. Figure 3 is a list of Laboratory staff that presented lectures.

During the course of 1988, numerous individuals received the privilege of participating in an internship program at the laboratory enabling them to get first hand experience of the daily activities of a forensic laboratory. The interns who participated in this program came from various colleges and law enforcement agencies. A total of 34 interns were enrolled in this program in 1988. Figure 4 is a list of interns for 1988.

FORENSIC SCIENCE LABORATORY

FIGURE 3

Lectures & Presentations for the year 1988

DATE	NAME	GROUP	TOPIC
NUARY	Robert K. O'Brien	Martin Kellog Middle School Newington, CT	"Forensic Science"
	Dr. Henry C. Lee	Dept. of Health Services, Hartford, CT	"Serological and other lab Techniques for Criminalist
	Dr. Henry C. Lee	Chiefs of Obstetrics & Gynecology Comm. Hartford, CT	"Uniform Rape Kit"
BRUARY	Dr. Henry C. Lee	Mass. State Police Academy, Framingham, Massachusetts	"Role of the Forensic Lab".
	Elaine Pagliaro	M.P.T.C. Protective Services Class, Meriden, CT	"Forensic Science Laborator Services"
RCH	Dr. Henry C. Lee	95th Eastern Armed Robbery Conference, New Britian, CT	"Latest Technology Related to Crime Scenes"
	Dr. Henry C. Lee	Homicide Investigation Seminar, New Orleans, LA	"Crime Scene Investigations
	Dr. Henry C. Lee	International Homicide Seminar, Columbus, Ohio	"Advances in Forensic Science"
	Dr. Henry C Lee	Criminal Justice Tng. Prgm., Meriden, CT	"Role of the Forensic Lab in Arson Cases"
	Dr. Henry C Lee	Homicide School,New Britian P.D., New Britian, CT	"Crime Scene Homicide Investigations"
RIL	Dr. Henry C. Lee	Fire Marshal Class, Meriden, CT	"Arson I vestigations"
	Elaine Pagliaro	Independent Study & Seminar Program, New Haven, CT	"Forensic Science Services"
	Dr. Henry C. Lee	Medicolegal Investigation of Death Seminar, Morgantown,VA	"The Crime Scene Investigation"
	Dr. Henry C. Lee	Yale Law School, New Haven,CT	"Forensic Science and The Law"
	Dr. Henry C. Lee	Veterans Administration Hospital, Wset Haven, CT	"Forensic Science"
	Dr. Henry C. Lee	National Law Enforcement Institute, Chicago, IL	"Criminal Investigation and Physical Evidence"
	Dr. Henry C. Lee	Fairfield County Detective School, Bridgeport, CT	"Crime Scene Reconstruction"
	Dr. Henry C. Lee	Orange Rotary Club, Orange, CT	"Forensic Science"
	Dr. Henry C. Lee	International Homicide Inv. Seminar, Phoenix, Arizona	"Advances in Crime Scene Investigations"
	Dr. Henry C. Lee	Criminal Justice Tng. Acad., Needham, MA	"New Advances in Forensic Science"
	Dr. Henry C. Lee	I.A.I. Annual Conference, Houston, Texas	"Crime Scene Investigations"
NE	Dr. Henry C. Lee	VICAP Intern. Homicide Symposium, FBI, Quantico, VA	"Transient Conditional, Patterns/Transfer Evid."
	Dr. Henry C. Lee	Conn. Bar Association, New Haven, CT	"Forensic Science"

FORENSIC SCIENCE LABORATORY

FIGURE 3

Lectures & Presentations for the year 1988

DATE	NAME	GROUP	TOPIC
NE (Continued)	Dr. Henry C. Lee	M.P.T.C., Meriden, CT	"Intermediate Crime Scene School"
LY	Dr. Henry C. Lee	National Law Enf. Institute, Denver, Colorado	" Homicide Scene Investigatio
	Dr. Henry C. Lee	Milford Rotary Club, Milford CT	"Crime Laboratory"
GUST	Dr. Henry C. Lee	N.E. Assoc. of Chem. Teachers Connecticut	"Analytic Approaches to Homicide Investigation"
	Dr. Henry C. Lee	Colby College Forensic Med. Seminar, Maine	"Forensic Sciences"
	Dr. Henry C. Lee	Milford Y.M.C.A., Milford, CT	"Forensic Science"
	Dr. Henry C. Lee	Hotchkiss School,(Assoc. of Salisbury, CT Chem.Teachers)	"Forensic Science"
	Robert S. Finkle	State Police Recruit Class, Bloomfield, CT	"Latent Print Analysis"
	Dr. Henry C. Lee	State Police Recruit Class, Bloomfield, CT	"Forensic Science"
TOBER	Dr. Henry C. Lee	Hank Williams Seminar, N.Y. State Police, Albany, N.Y.	"Forensic Science"
	Elaine Pagliaro	U-Conn, Storrs, CT	"Laboratory Services"
	Dr. Henry C. Lee	Crim. Justice Forensic Conference,	"Techniques of Fingerprinting"
	Dr. Henry C. Lee	N.E.A.F.S. Annual Meeting, Mystic, CT	"Homicide Case Investigation"
	Dr. Henry C. Lee	AFOSI Educational Conference, Peace Air Force Base, N.H.	"Crime Scene Investigation"
	Dr. Henry C. Lee	Fairfield Cnty. Det. Assoc., Bridgeport, CT	"Forensic Science"
VEMBER	Dr. Henry C. Lee	Seoul, Korea	"Crime Scene Photography"
	Dr. Henry C. Lee	Taipei, Taiwan	"Police and Forensic Photography"
	Dr. Henry C. Lee	99th Eastern Armed Robbery Conf. Maryland State Police	"Crime Scene Reconstruction"
	MaryBeth Guman	East Haven High School, East Haven, CT.	"Law Related Education Program/Forensic Science"
	Sgt. Robert J. Mills	Mattatuck Community College, Waterbury, CT	"Law Related Education Program/Forensic Science"
	Elaine Pagliaro	Protective Services Class, Meriden, CT	"Forensic Science Lab Services"
CEMBER	Daniel Tramontozzi	Mohegan Community College, Norwich, CT	"Law Related Education Program/Forensic Science"
	Dr. Henry C. Lee	Fire Marshal's Class, Meriden, CT	"Role of the Forensic Lab in Arson Cases"

FORENSIC SCIENCE LABORATORY

FIGURE 4

INTERNSHIPS AT THE FORENSIC SCIENCE LABORATORY 1988

NAME	AGENCY/SCHOOL	DATE(S)
Lori Beauregard	U-CONN	1/1 - 1/29
T.F.C. Warren H. Hyatt	State Police	1/12
T.F.C. Carl T. Kiernan	State Police	1/12
T.F.C. James A. Mitchel	State Police	1/12
Roseann Schuberth	U-CONN	1/15 - 7/14
Robert Shaw	U-CONN	1/15 - 7/14
Patricia A. Gregory	St. Joseph College	1/26 - 5/4
Dr. Mary Ann Clayton	R.I. Medical Examiner	2/1 - 2/5
T.F.C. Robert L. Harris	State Police	2/2
T.F.C. Donald W. Kulish	State Police	2/2
T.F.C. Michael S. Rutkowski	State Police	2/2
Trooper Peter R. Terenzi	State Police	2/2
Robert C. Koetsch	Univ. of New Haven	2/2 - 3/23; 5/3 - 5/6
Teresa M. Coelho	St. Joseph College	2/3 - 5/4
John E. U. Jiang	Taiwan Police	4/18 - 4/29
Pei-Chin Yin	Taiwan Police	4/18 - 4/29
Officer Kathryn Dionne	Middlebury Police	4/18 - 4/22
Charles S. Baker	Univ. of New Haven	5/9 - 5/27
Robert G. Babcock	Univ. of Tampa, Florida	5/16 - 7/22
Shanti Patel	Ocean Beach County Sheriff, N.J.	5/16 - 5/20
Det. Rodney G. Gotowala	Bristol Police	6/8 - 6/10
Natalie A. Chamberlain	St. Joseph College Enrichment Pgm.	6/27 - 7/15
Shekufen Adibasamii	U-CONN	7/15 - 12/31
Ja-Chin Chen	Taiwan Police	7/18 - 8/5
Sgt. Katherine Wilson	Waterbury Police	7/19 - 7/20
Daniel D. Beardsley	Univ. of New Haven	8/1 - 9/2
Mary Stone Hyde	Central CT State University	8/29 - 12/31
Elizabeth Piotrowski	St. Joseph College	9/1 - 12/10
Tpr. Ronald J. Lewis	State Police	9/14
Tpr. Peter E. Strniste	State Police	9/14
Tpr. Mark V. Jazwinski	State Police	9/14
T.F.C. Howard T. Eckels	State Police	10/19
T.F.C. Gerald A. Hickman	State Police	10/19
T.F.C. Paul Moore	State Police	10/19

RECENTLY PURCHASED SCIENTIFIC EQUIPMENT

The Forensic Laboratory purchased some new scientific equipment in 1988 to enhance its present line of analytical instrumentation. The addition of this equipment increased case turn over time and improved existing identifaction techniques. A description of this new equipment follows:

Portable Laser

In 1988, the laboratory acquired an Omnichrome Laserprint 1000 portable argon laser. The laser can be used either as a backup to the stationary laser or due to its compact size can be transported to remote crime scene locations by laboratory personnel. The Major Crime Scene vans are equipped with generators which can be used to power the laser.

The latent fingerprint section has various fluorescent dyes and powders available for use with the laser. Although the laser is frequently considered a searching tool for fingerprints, it also is useful to the other sections of the laboratory. The laser can be utilized by the document section or in the Criminalistics section to locate hairs, fibers, body fluids and bank dyes.

Luminescence Spectrometer

A luminescence spectrometer was purchased by the laboratory in 1988 which has both fluorescese and phosphorescence capabilities. The addition of this instrument allows the criminalist to analyze evidentary materials in both the visible and ultraviolet light region. For compounds that are fluorescent, this instrument will enable the criminalist to detect samples which are in the part per billion.

Comparison Microscope and Stereo-microscope

The comparison microscope and stereo-microscope function as vital tools in the discipline of forensic hair and fiber examination. The comparison microscope consists of two compound microscopes interfaced by an optical bridge. This bridge enables the examiner to visualize the questioned speciman and compare it to known specimens simultaneously. This technique facilitates a valid comparison of two objects in a similar optical plane. The binocular stereo-microscope consists of a twin set of magnifying lenses which are offset to facilitate a three dimensional view of small objects at varying magnifications.

Intensified Ultraviolet Viewer

In 1989, the laboratory acquired a Hamamatsu Intensified Ultraviolet Viewer, a highly sensitive ultraviolet image observing device. This viewer enables the criminalist to detect the presence of trace evidence, fingerprints, imprints and forged documents by means of absorbed and reflected ultraviolet light.

High Intensity Alternate Light Source

An Omnichrome Omniprint 1000 high intensity alternate light source was purchased by the laboratory in 1989. This light source is a tuneable wavelength source of light used for the detection of fluorescence and luminescence of various surfaces. This piece of equipment has a wide array of uses particularly in the areas of latent fingerprint detection, document examinations, trace evidence analysis and general crime scene examination.

PLANS AND GOALS FOR 1989

Each year the Forensic Science Laboratory sets goals to improve its techniques in assisting law enforcement agencies. The year 1989 is no exception. With the advent of DNA technology being recognized in the forensic community, the Connecticut State Police Forensic Laboratory is currently researching this novel technique in hope of implementing this procedure in cases which warrent its application. Likewise, the Automated Fingerprint Identification System (AFIS) is currently awaiting its introduction into the Forensic Science Laboratory's standard protocol in identifying latent fingerprints.

The acquistion of a GC/MS is expected for the fall of 1989. This instrument will increase the laboratory's analytical capabilities with respect to separating and identifying individual componets of complex mixtures. This will be of particular relevance in arson, explosive and "what is it?" types of cases.

To account for the tremendous volume of case submissions received by the laboratory each year, the laboratory is in the process of reorganizing its filing process and converting over to a fully computerized system. This procedure will track the items as they are passed through the various sections of the laboratory and help expedite the cases.

The 1988 Annual Report was authored by William H. Paetzold and Robert K. O'Brien as part of a special project for the Forensic Laboratory. The authors thank the laboratory personnel who assisted in the compilation of this Report.