

Geology  
GJBX-(79)-138

GJBX-138 '79

**AERIAL RADIOMETRIC AND MAGNETIC SURVEY**  
LEMMON NATIONAL TOPOGRAPHIC MAP  
SOUTH DAKOTA

GEOLOGICAL SURVEY OF MONTANA

PREPARED FOR THE U.S. DEPARTMENT OF ENERGY  
GRAND JUNCTION OFFICE  
GRAND JUNCTION, COLORADO  
UNDER BENDIX FIELD ENGINEERING CORPORATION SUBCONTRACT NO. 78-183-S

GEOLOGY



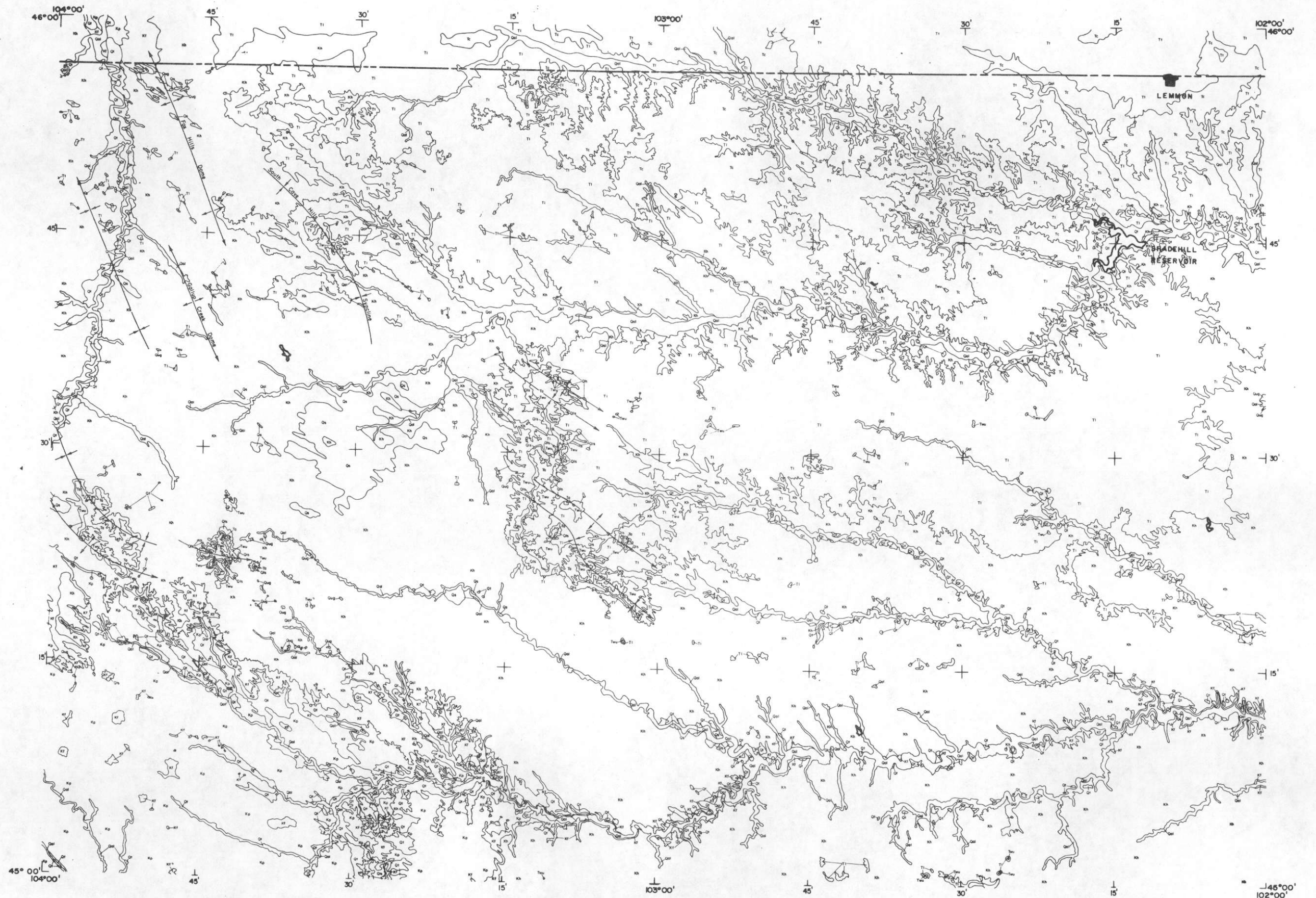
**Geodata International, Inc.**  
7035 JOHN W. CARPENTER FRWY.  
DALLAS, TEXAS 75247

**VOL. 2**

metadc958348

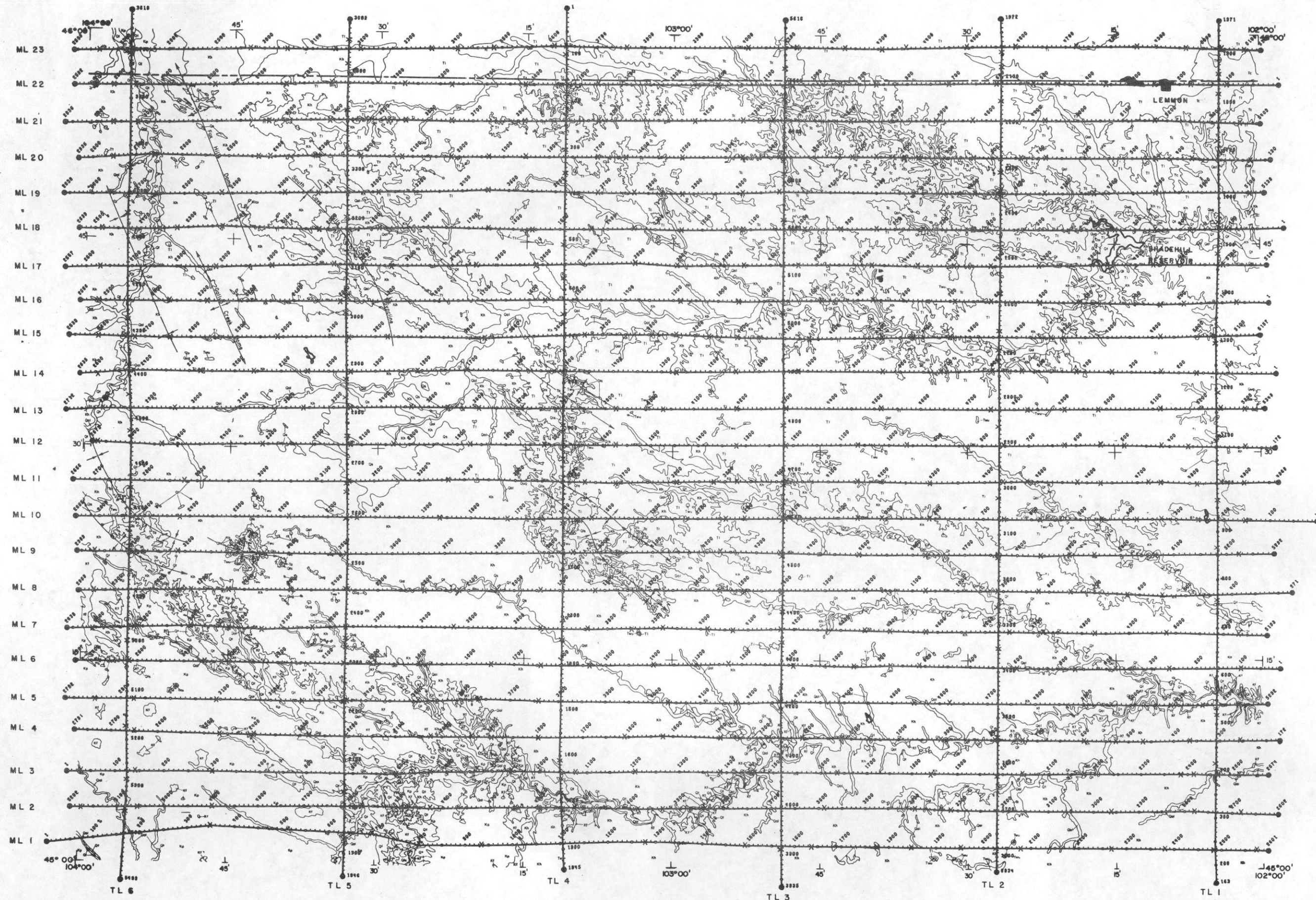
#### LEGAL NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.



NATIONAL GAMMA RAY MAP SERIES

**LEMMON SHEET**  
GEOLOGY



"X INDICATES FILM VERIFIED POINTS"

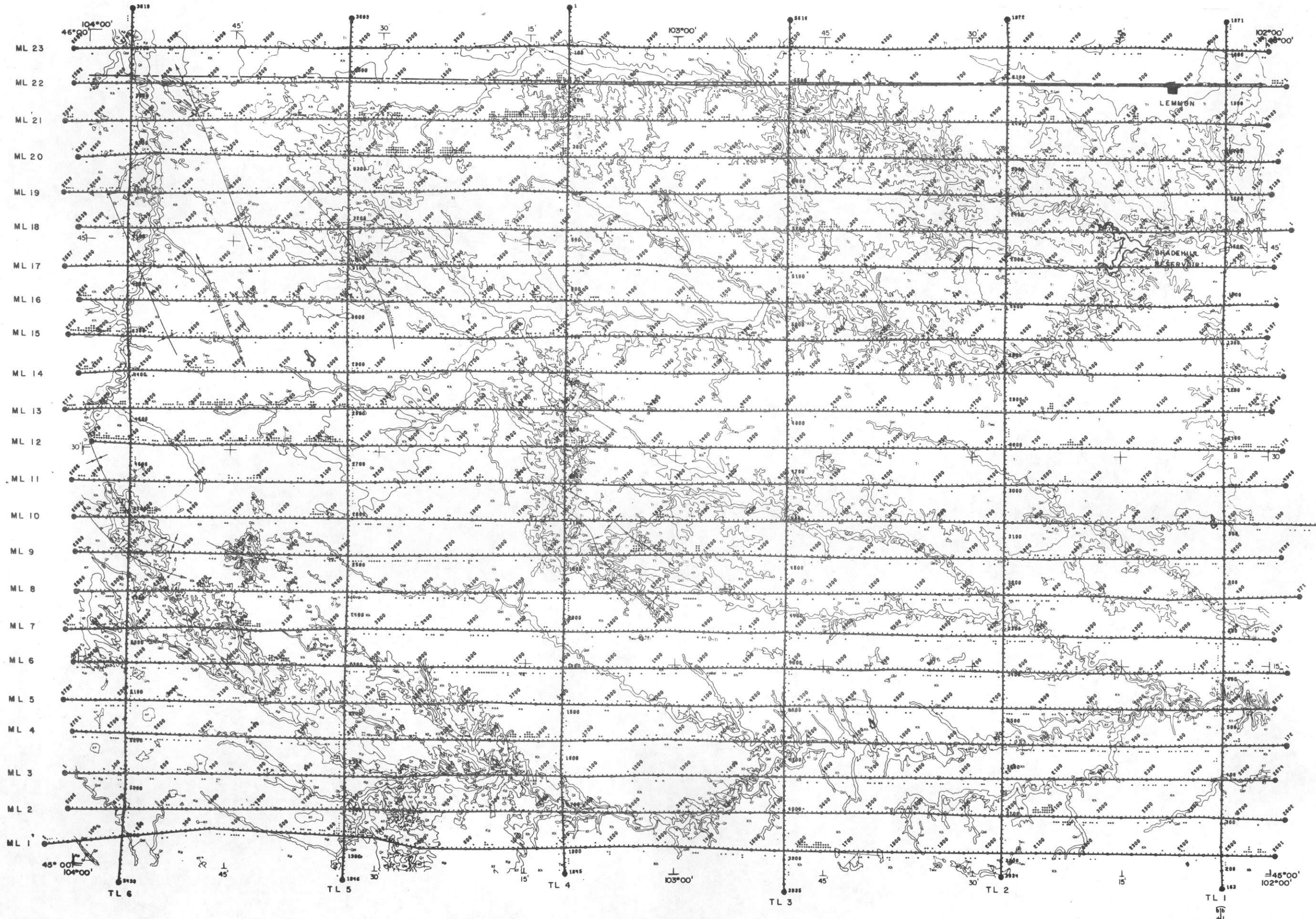


NATIONAL GAMMA RAY MAP SERIES

LEMMON SHEET

FLIGHT BASE

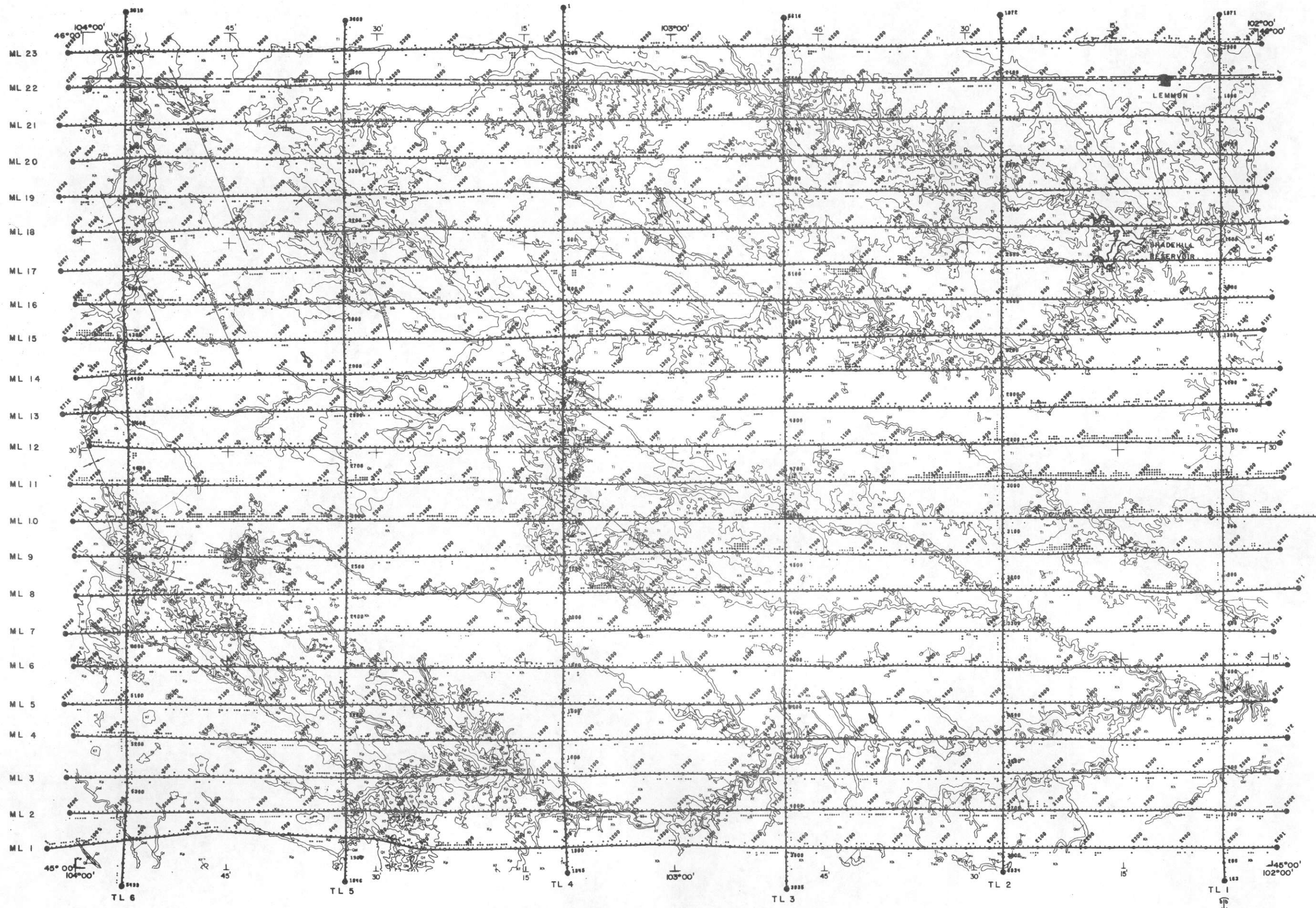




NATIONAL GAMMA RAY MAP SERIES

LEMMON SHEET

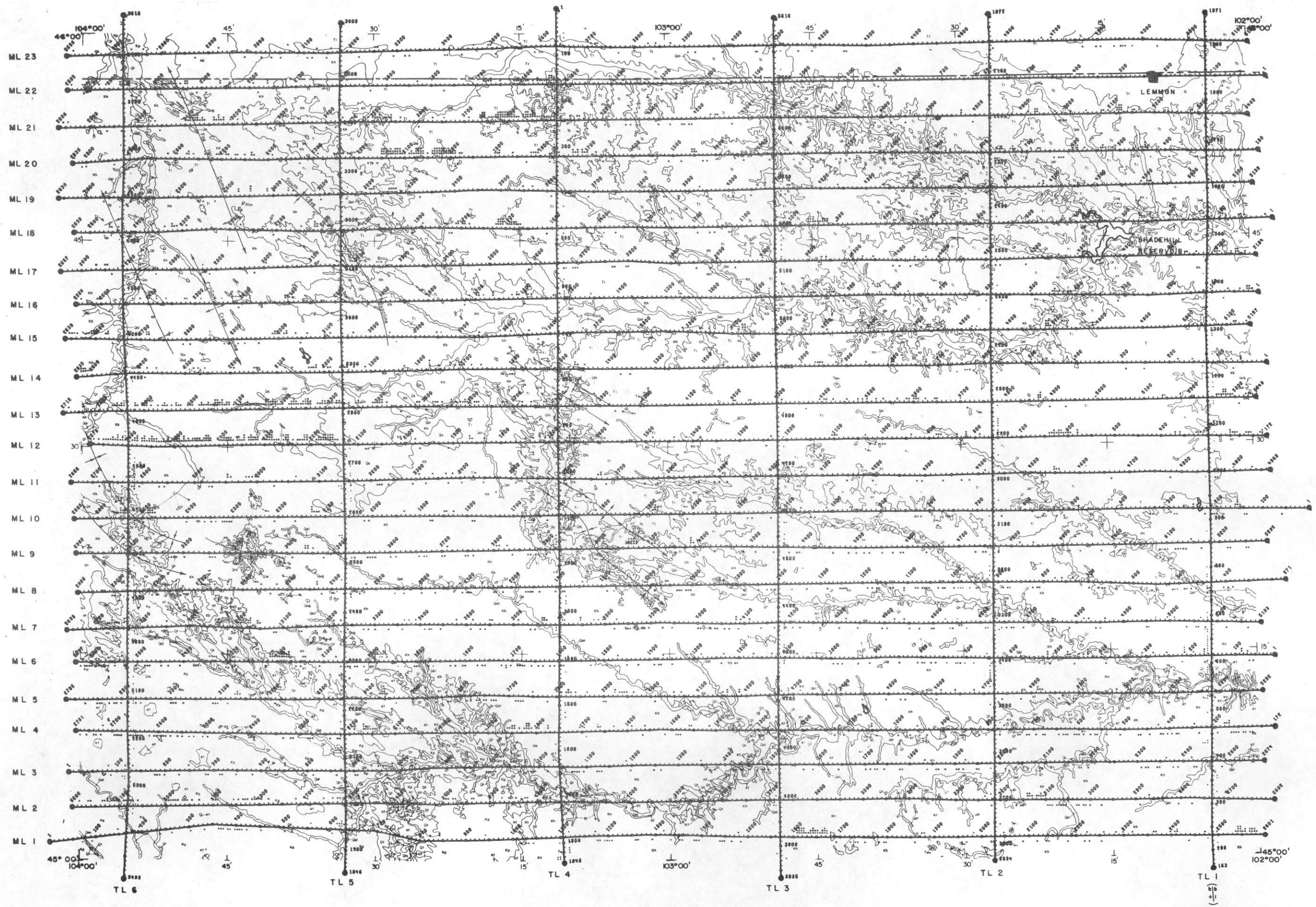
24' ± STANDARD DEVIATIONS



NATIONAL GAMMA RAY MAP SERIES

### LEMMON SHEET

± STANDARD DEVIATIONS

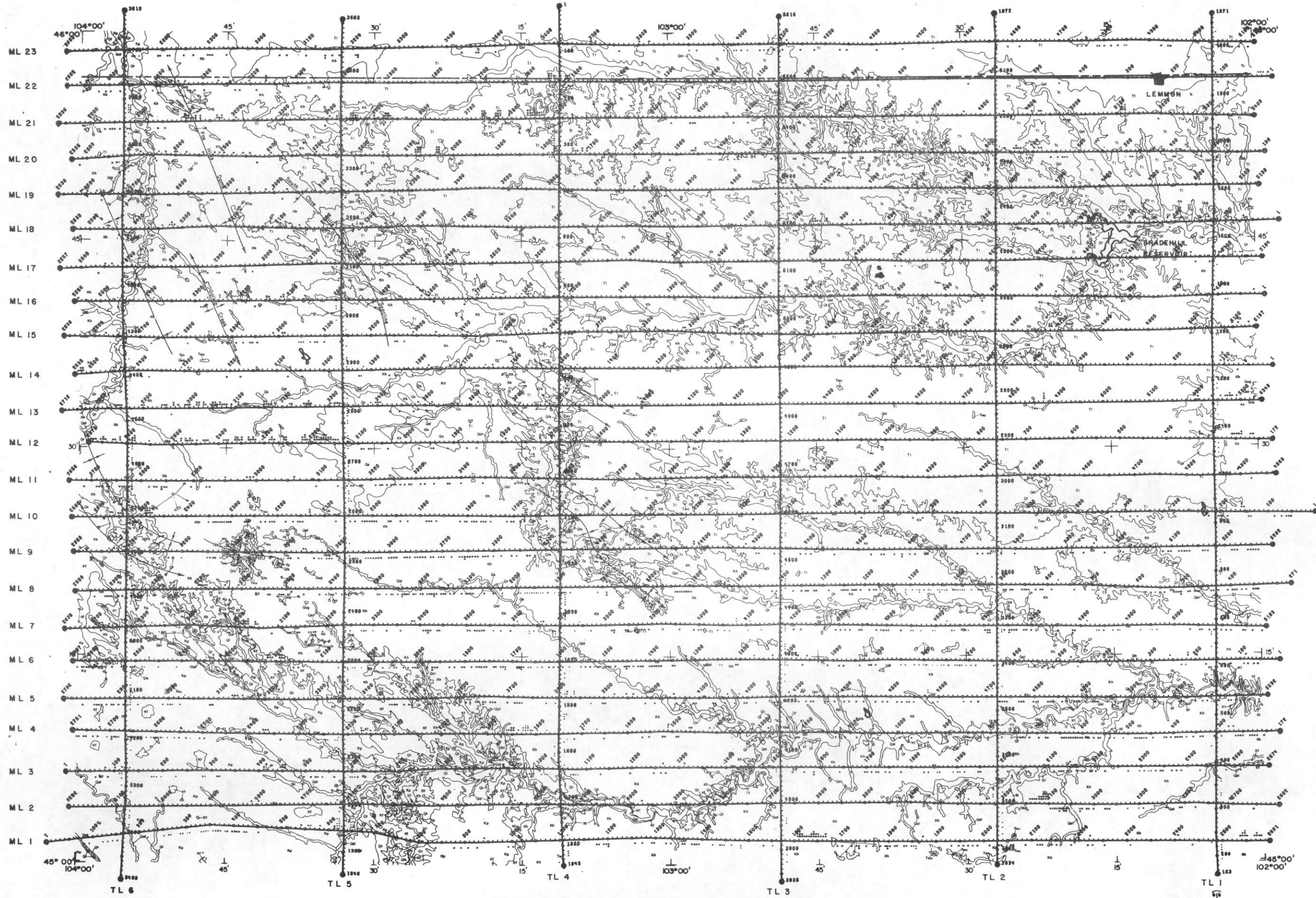


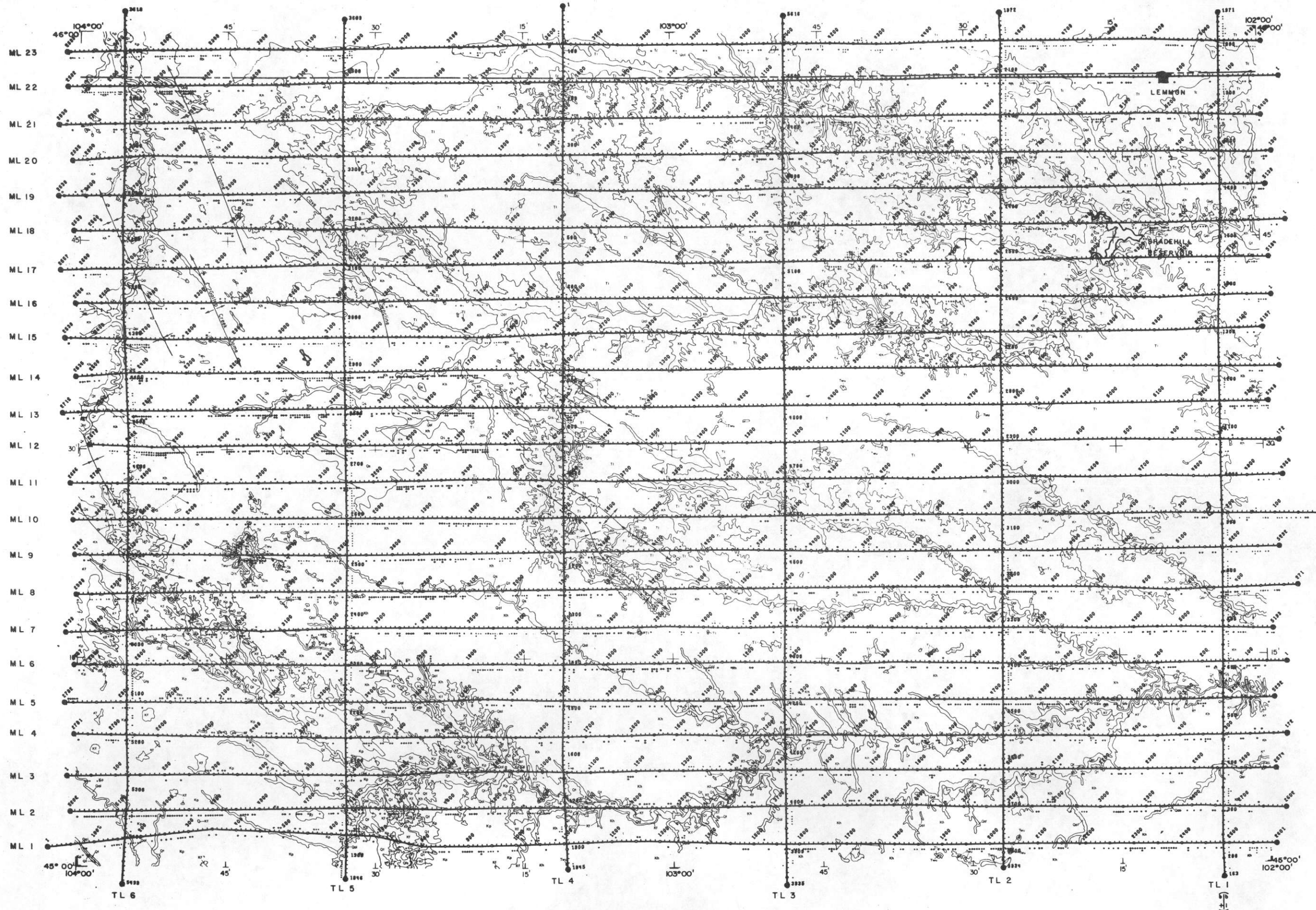
NATIONAL GAMMA RAY MAP SERIES

**LEMMON SHEET**

214 B1/208 T1 ± STANDARD DEVIATIONS



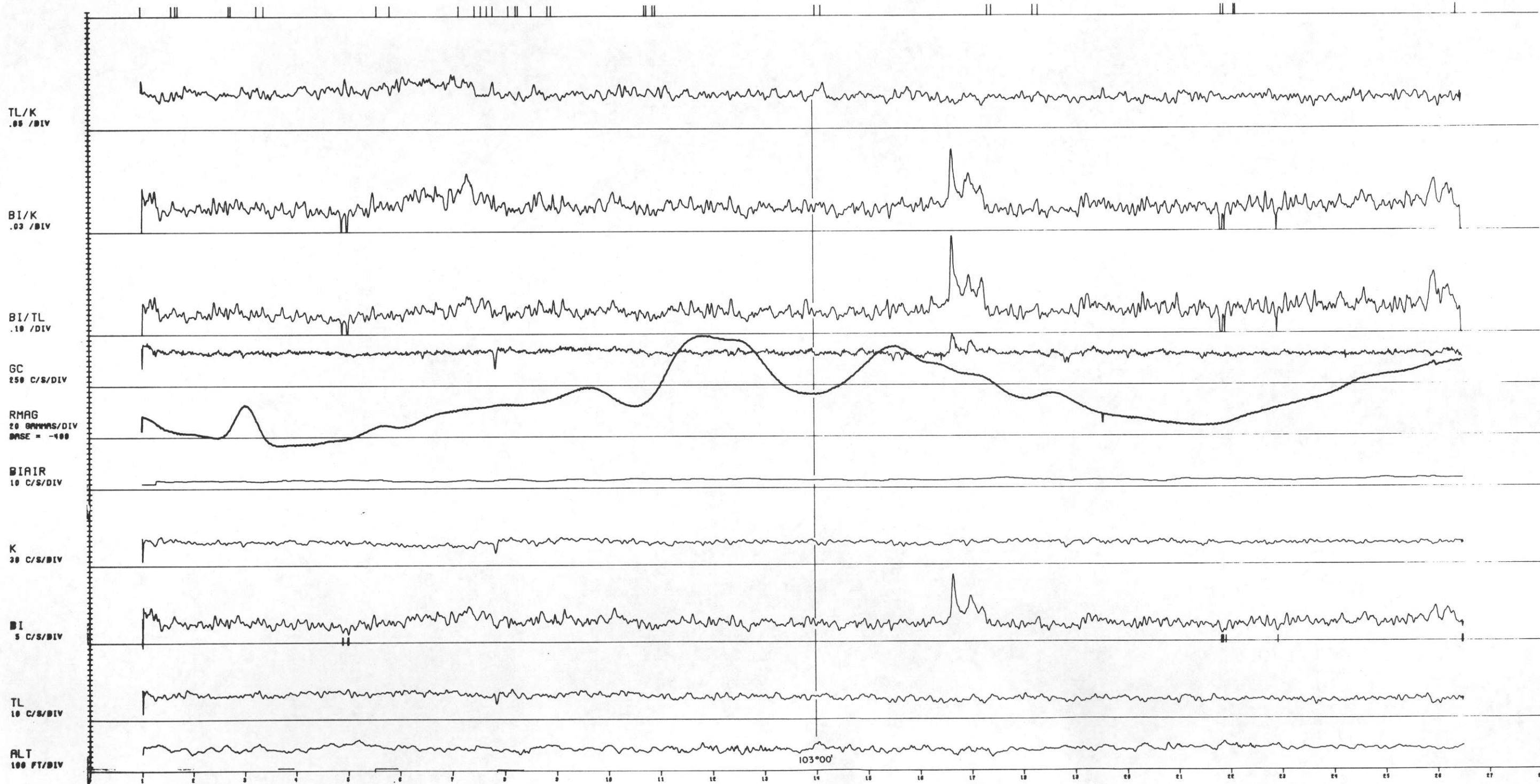
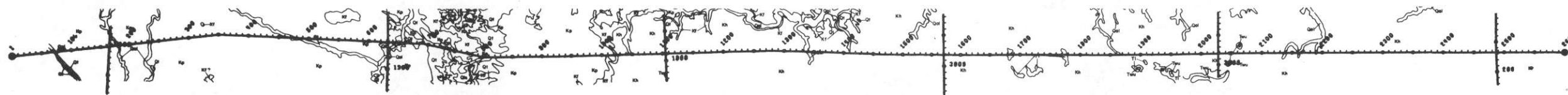




NATIONAL GAMMA RAY MAP SERIES

### LEMMON SHEET

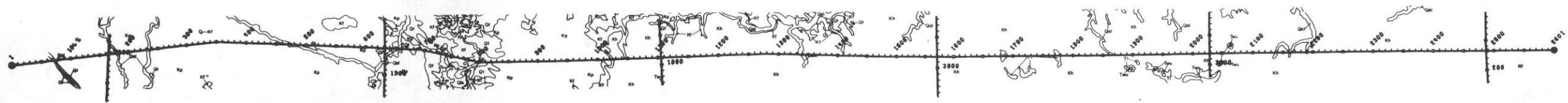
200 T1/40K ± STANDARD DEVIATIONS



ML 1 LEMMON

0 1 2 3 4 5 6 7 8 9 10 MILES

103°00'



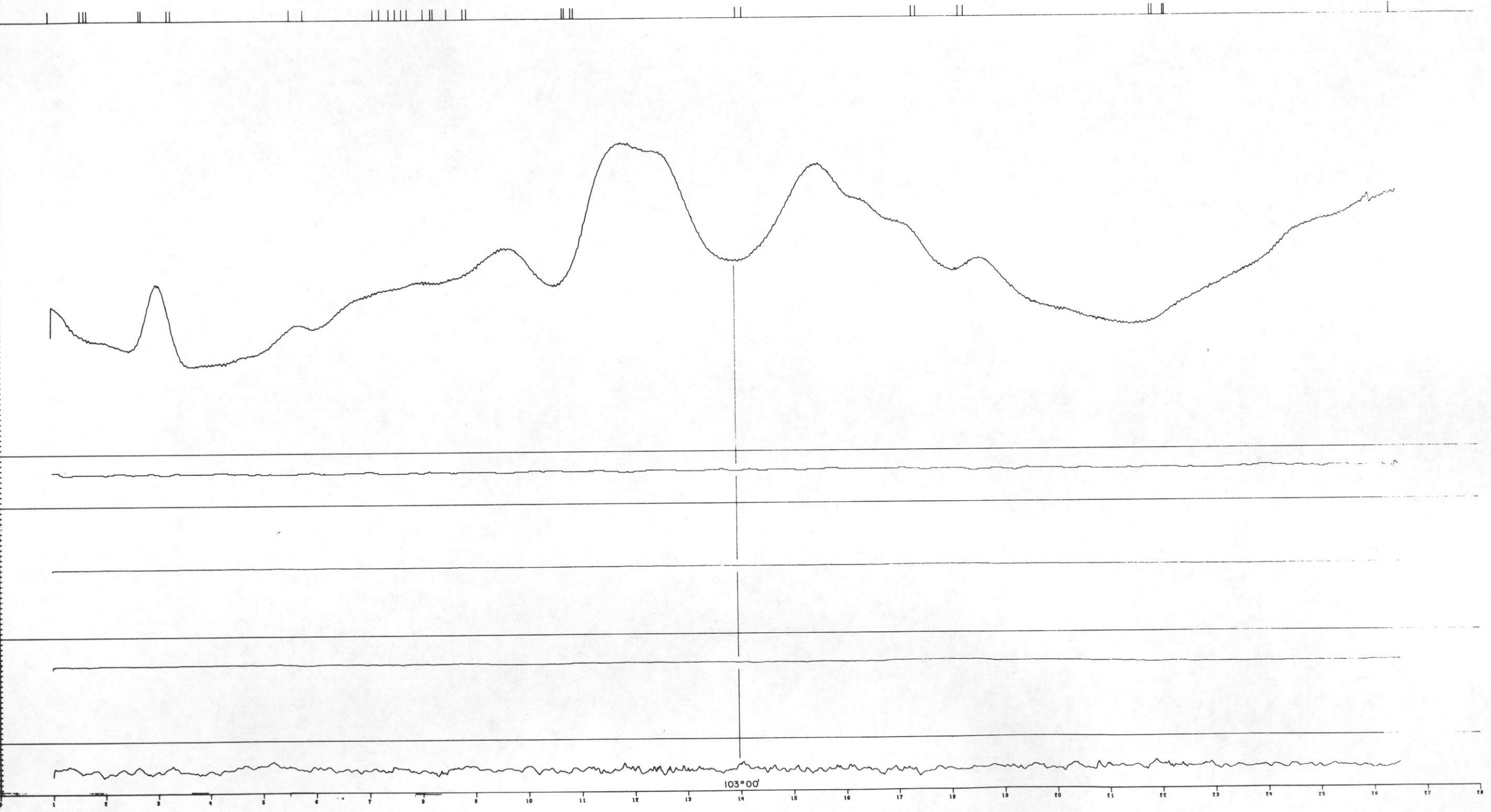
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 10

TEMP  
1 DEG C/DIV  
BASE = 15

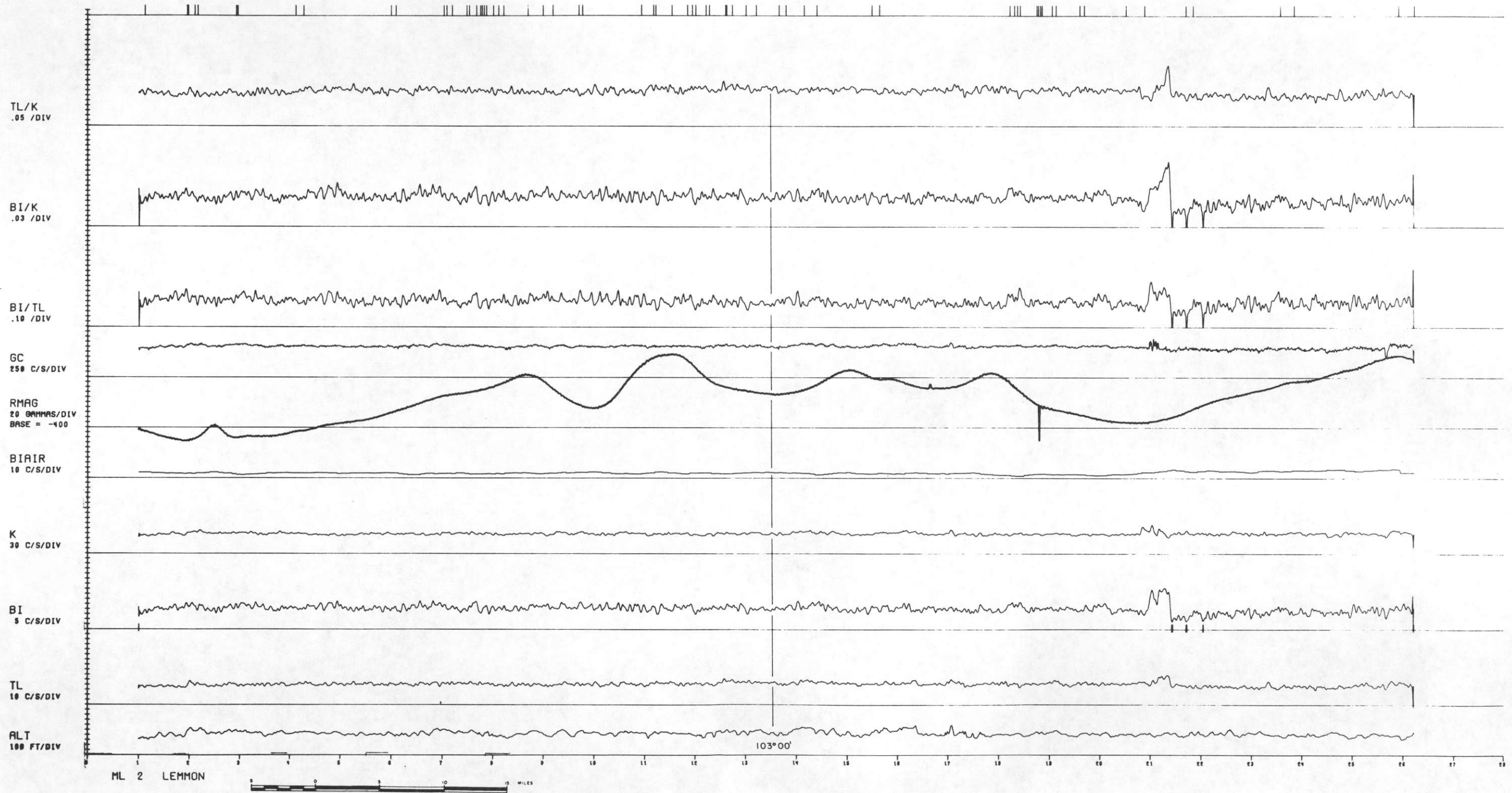
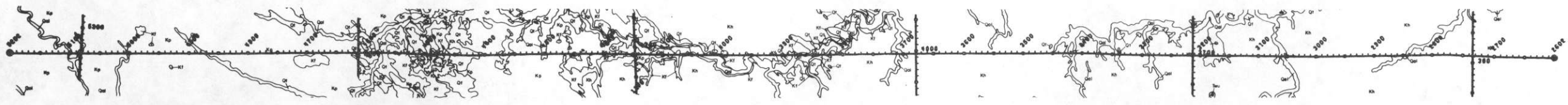
ALT  
100 FT/DIV

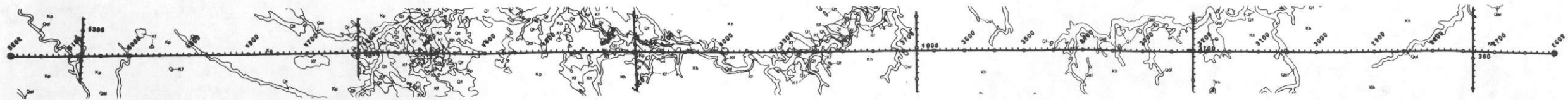


ML 1 LEMMON



103°00'





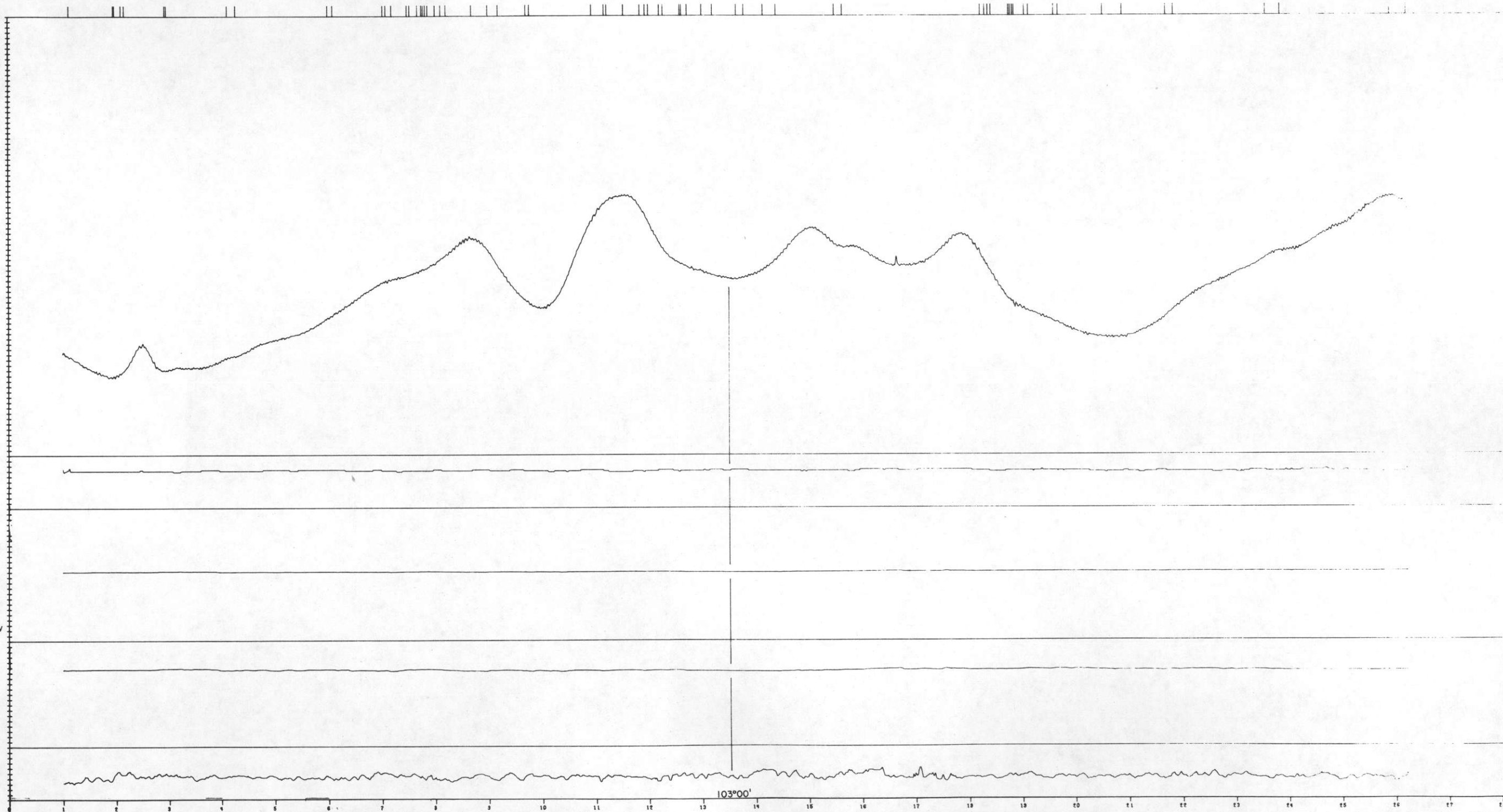
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

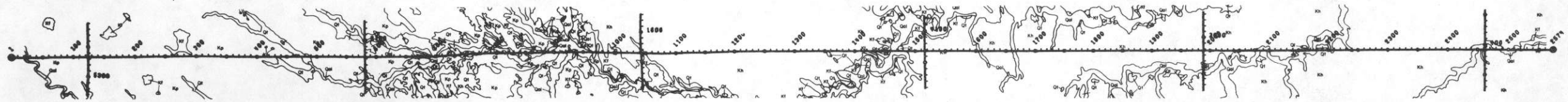
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



ML 2 LEMMON





TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

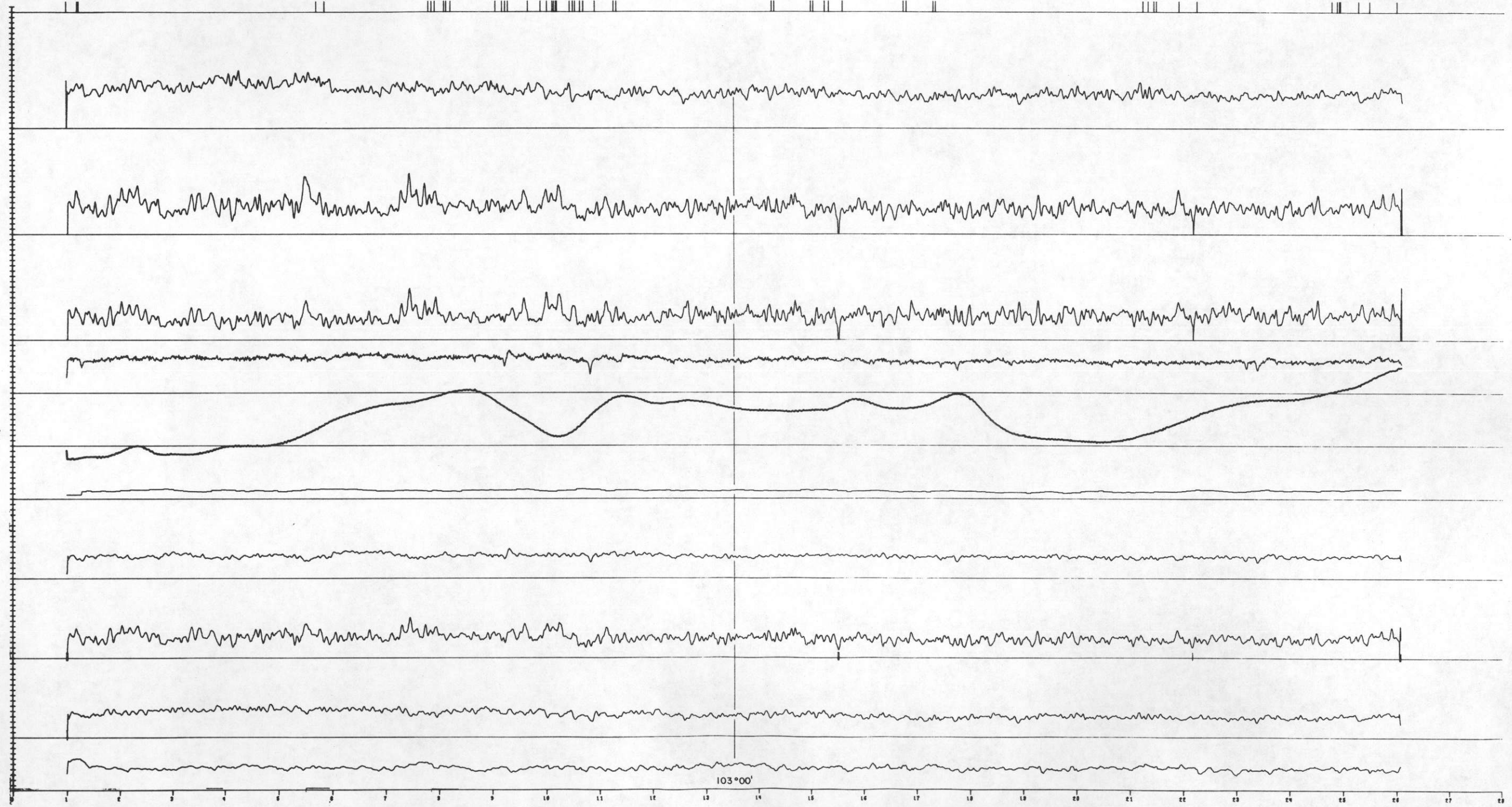
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

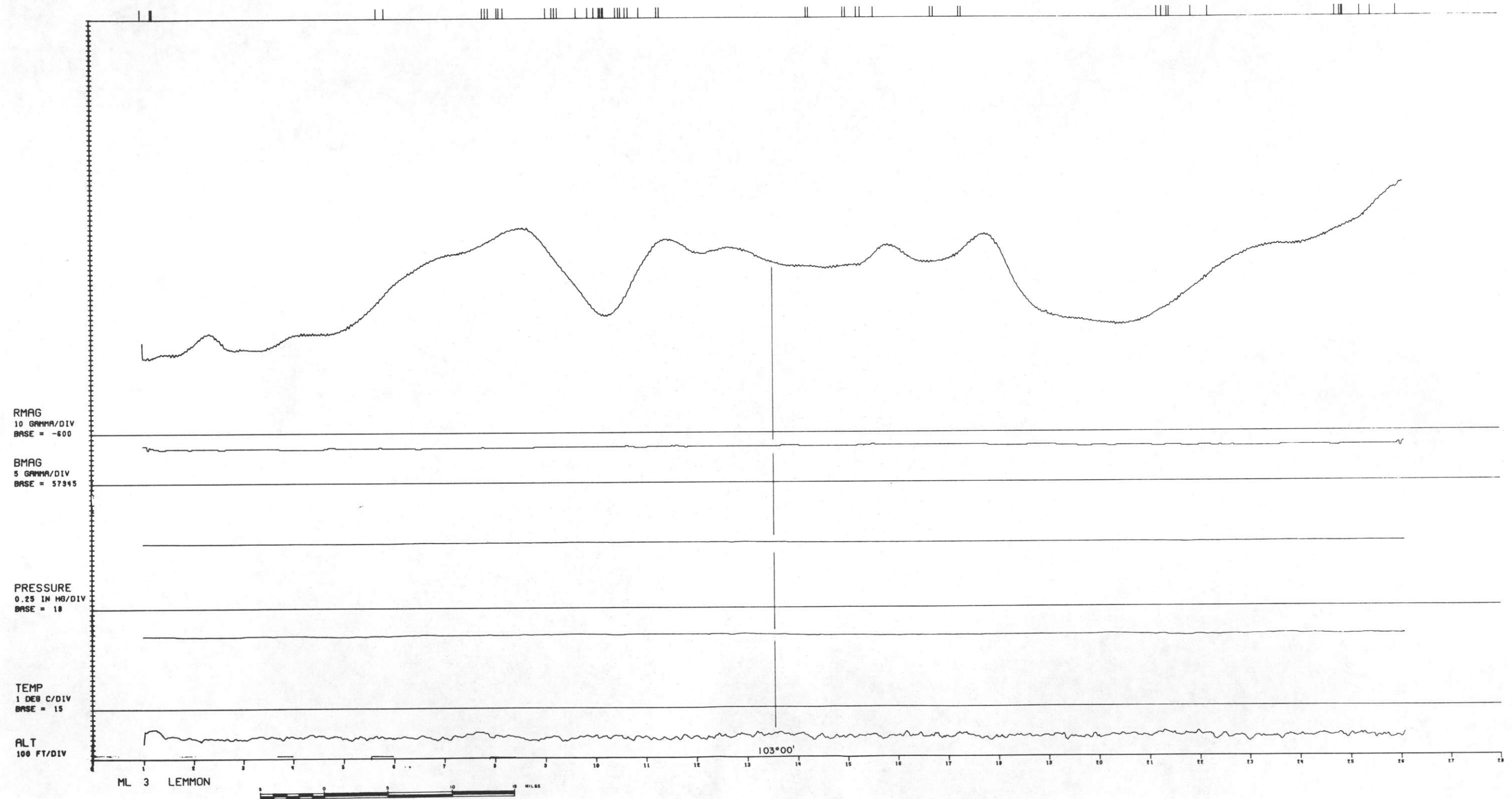
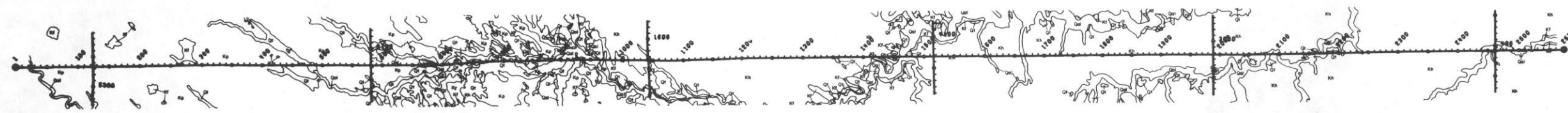
TL  
10 C/S/DIV

ALT  
100 FT/DIV



ML 3 LEMMON

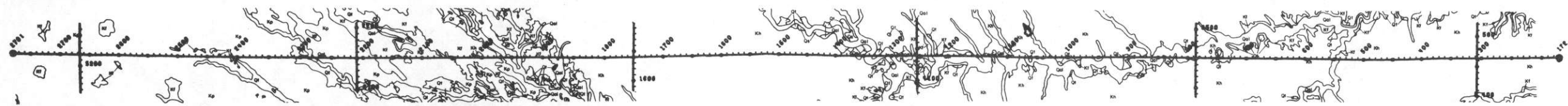




ML 3 LEMMON







TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -100

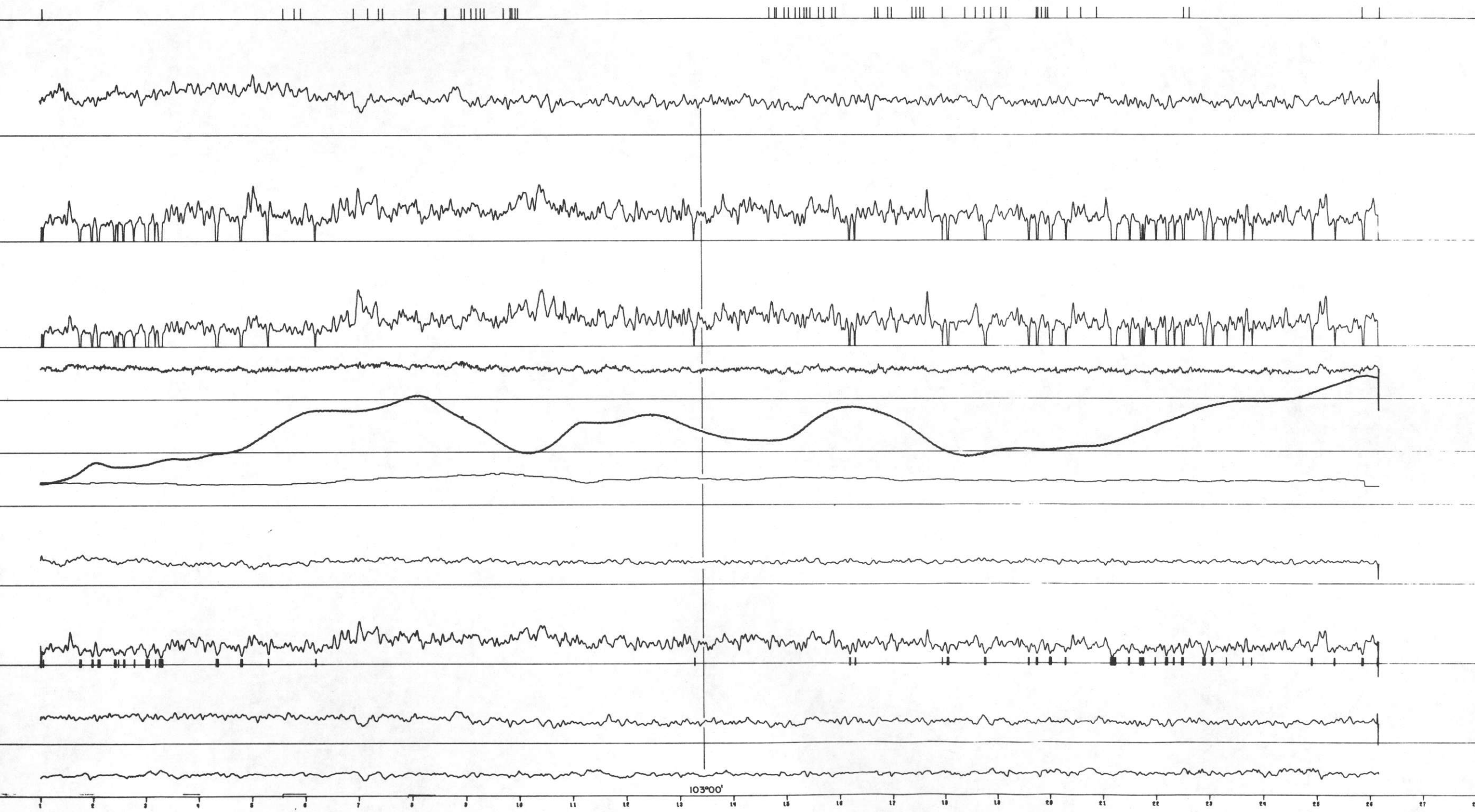
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

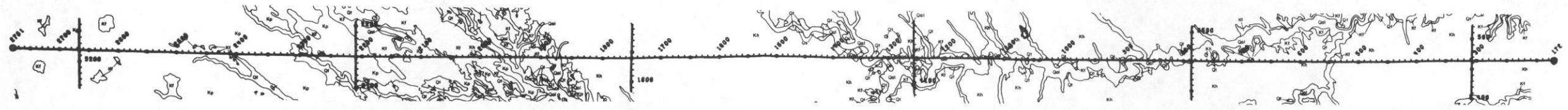
BI  
5 C/S/DIV

TL  
10 C/S/DIV

ALT  
100 FT/DIV



ML 4 LEMMON



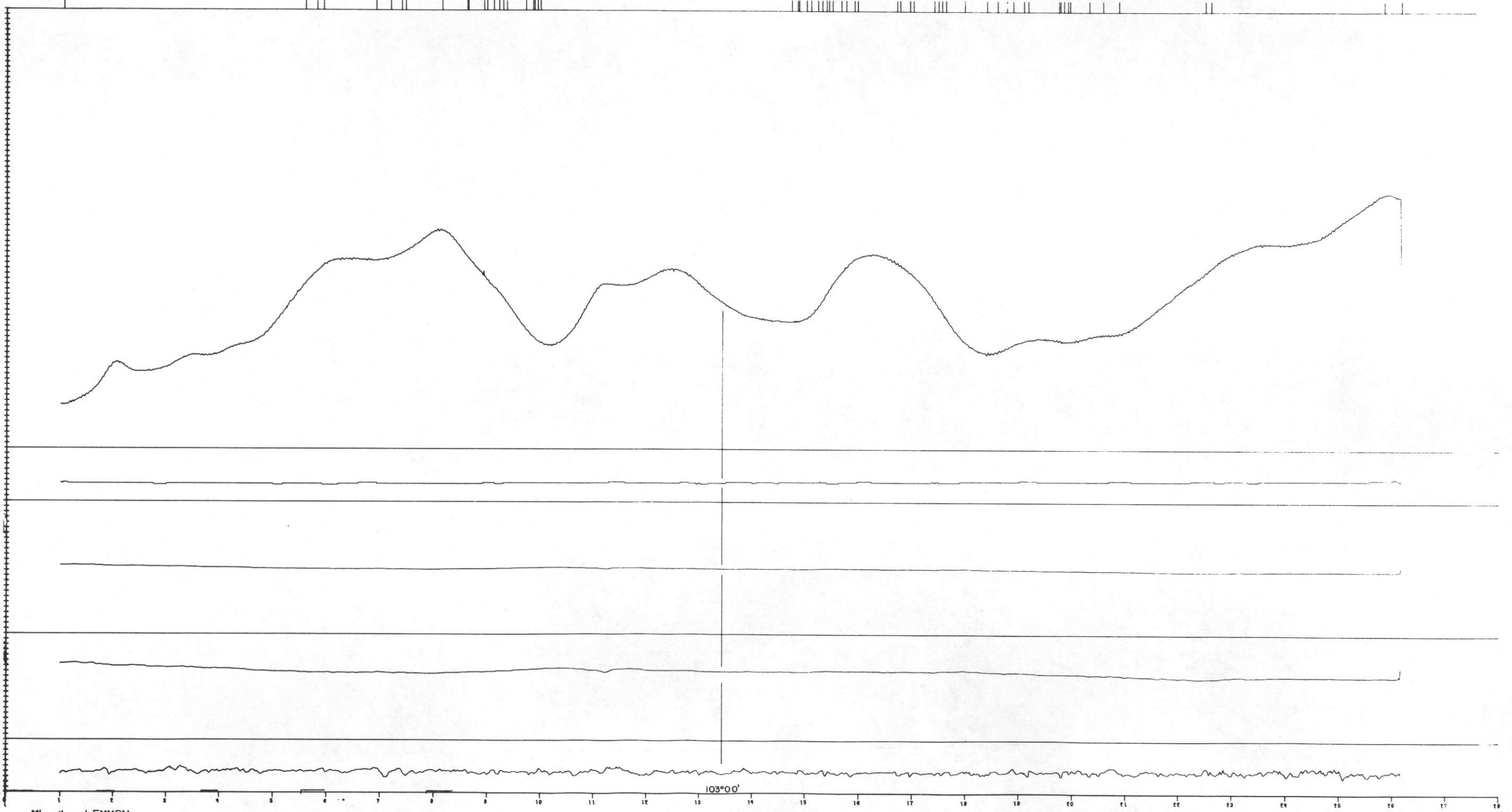
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

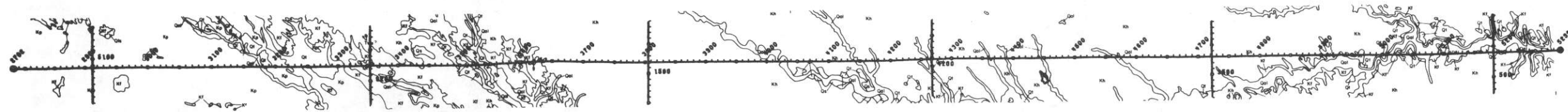
ALT  
100 FT/DIV



ML 4 LEMMON



103°00'



TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

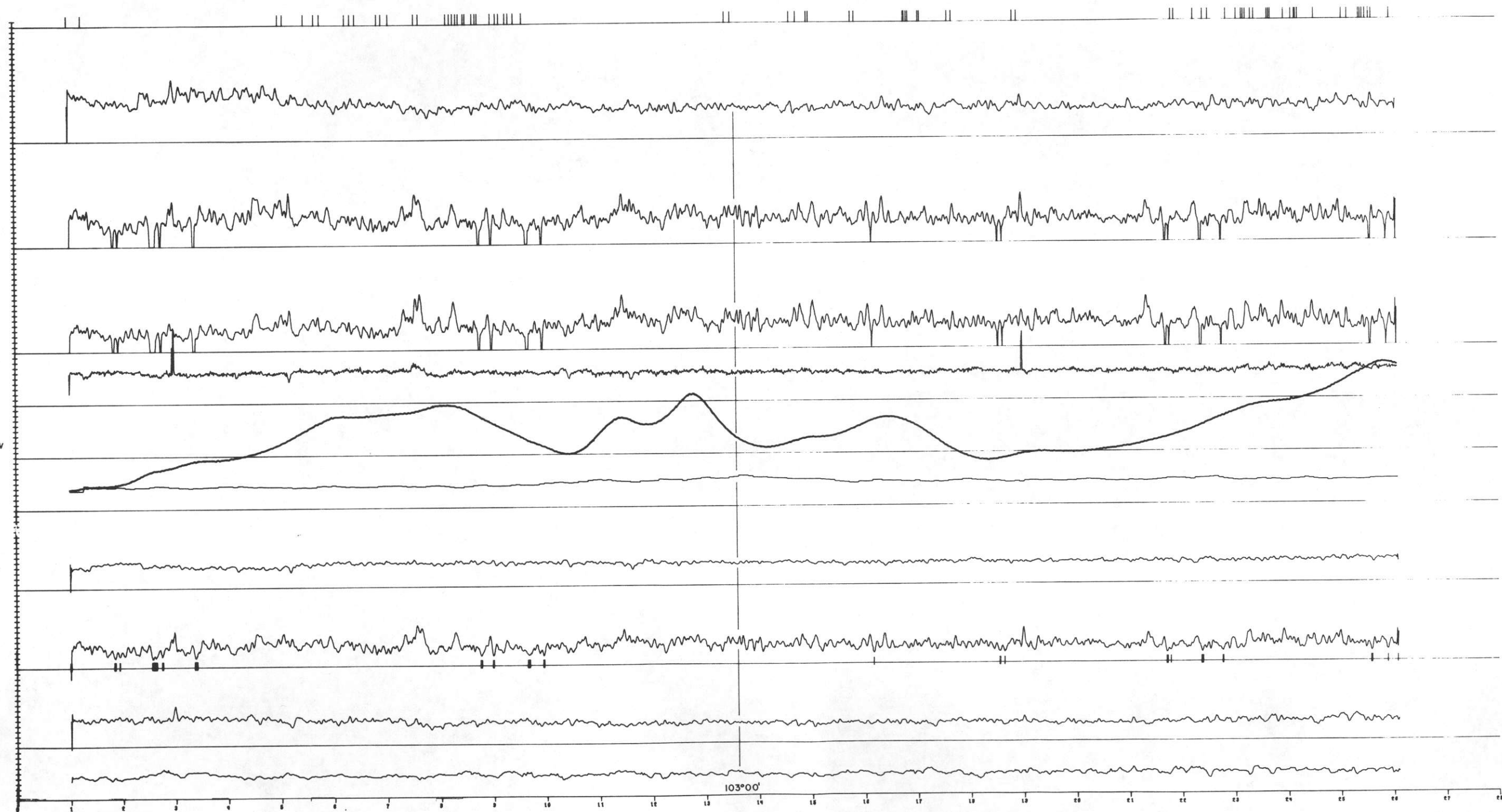
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

ALT  
100 FT/DIV

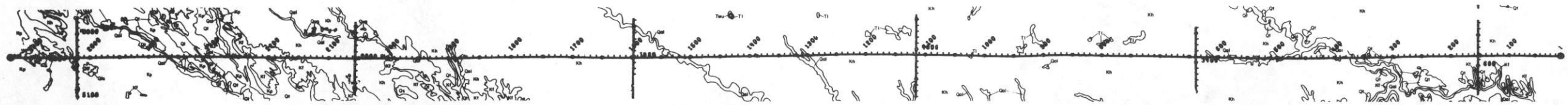


ML 5 LEMMON



103°00'





TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 WAVES/DIV  
BASE = -100

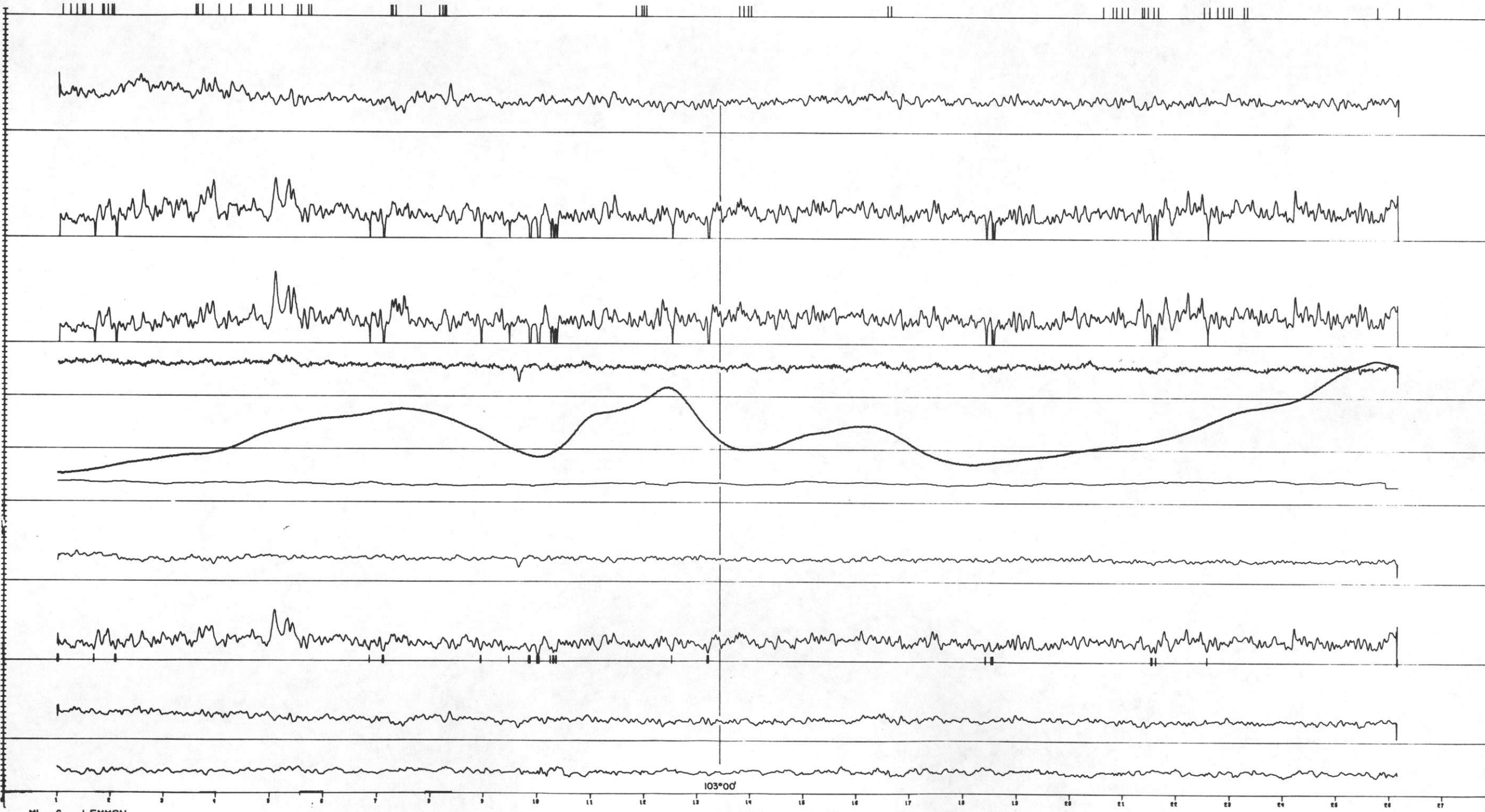
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

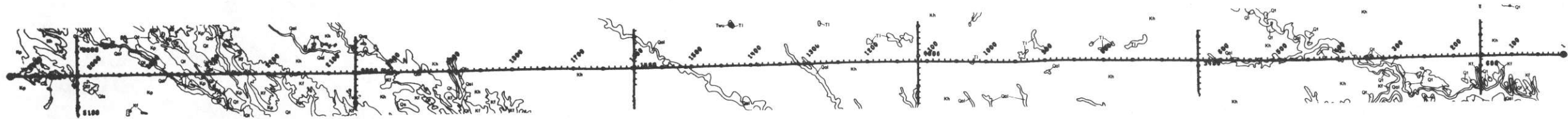
ALT  
100 FT/DIV



ML 6 LEMMON



103°00'



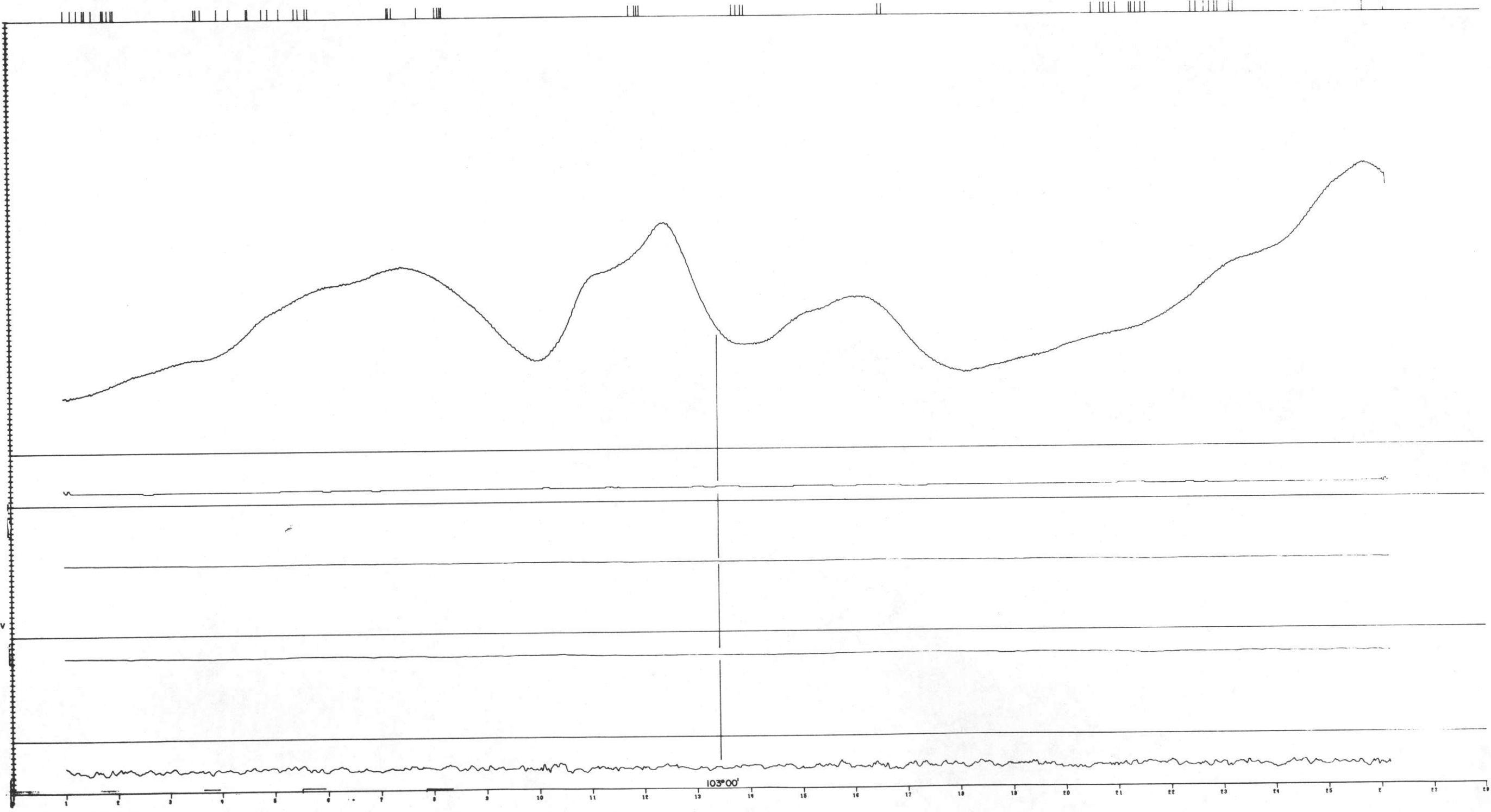
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

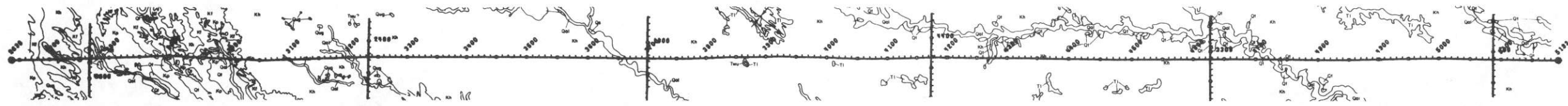
PRESSURE  
0.25 IN HG/DIV  
BASE = 10

TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



103°00'



TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAUSS/DIV  
BASE = -400

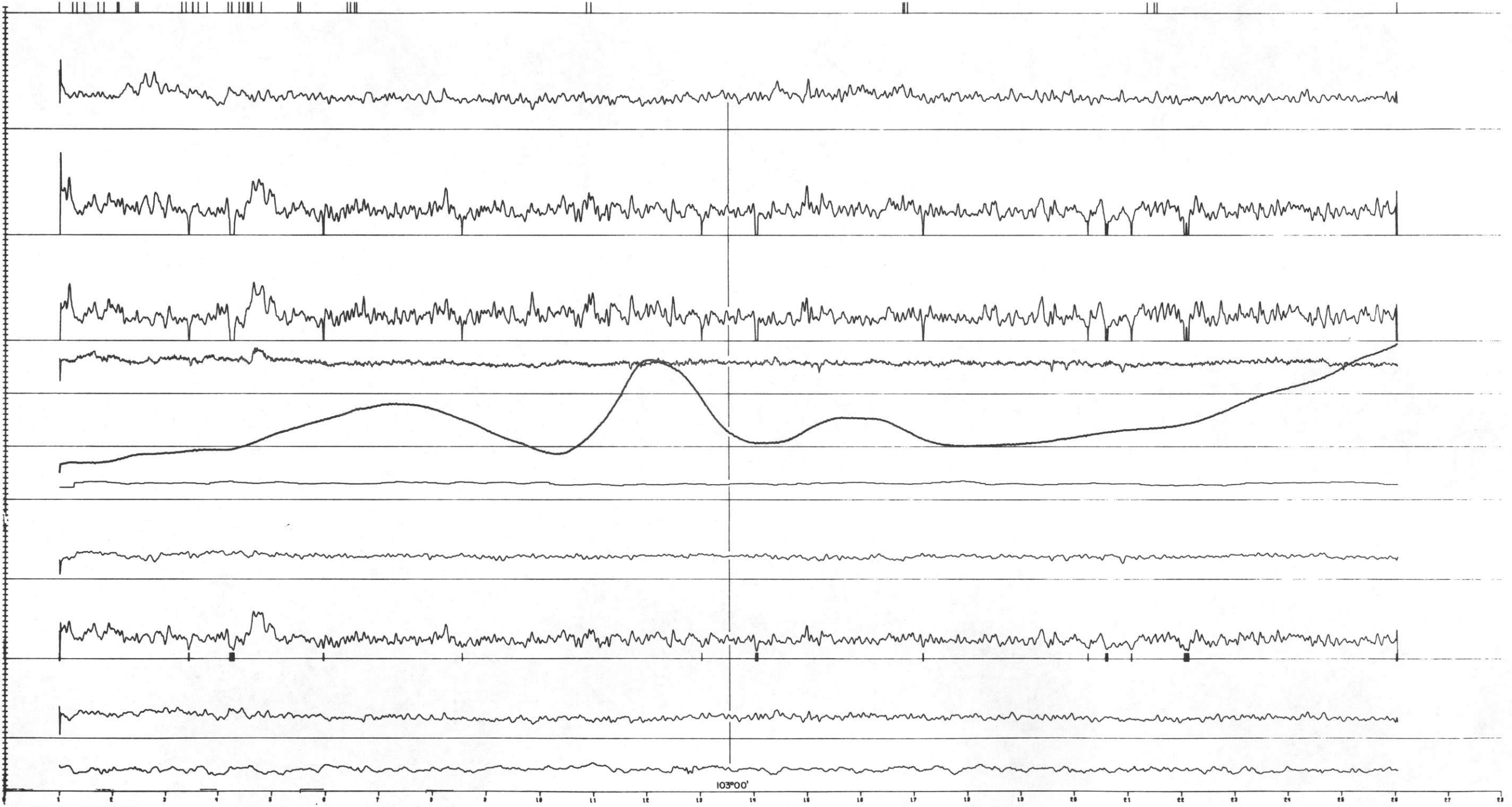
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

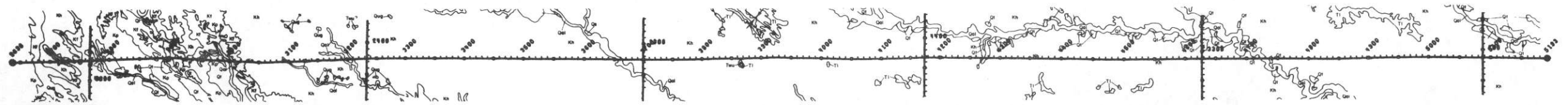
TL  
10 C/S/DIV

ALT  
100 FT/DIV



ML 7 LEMMON





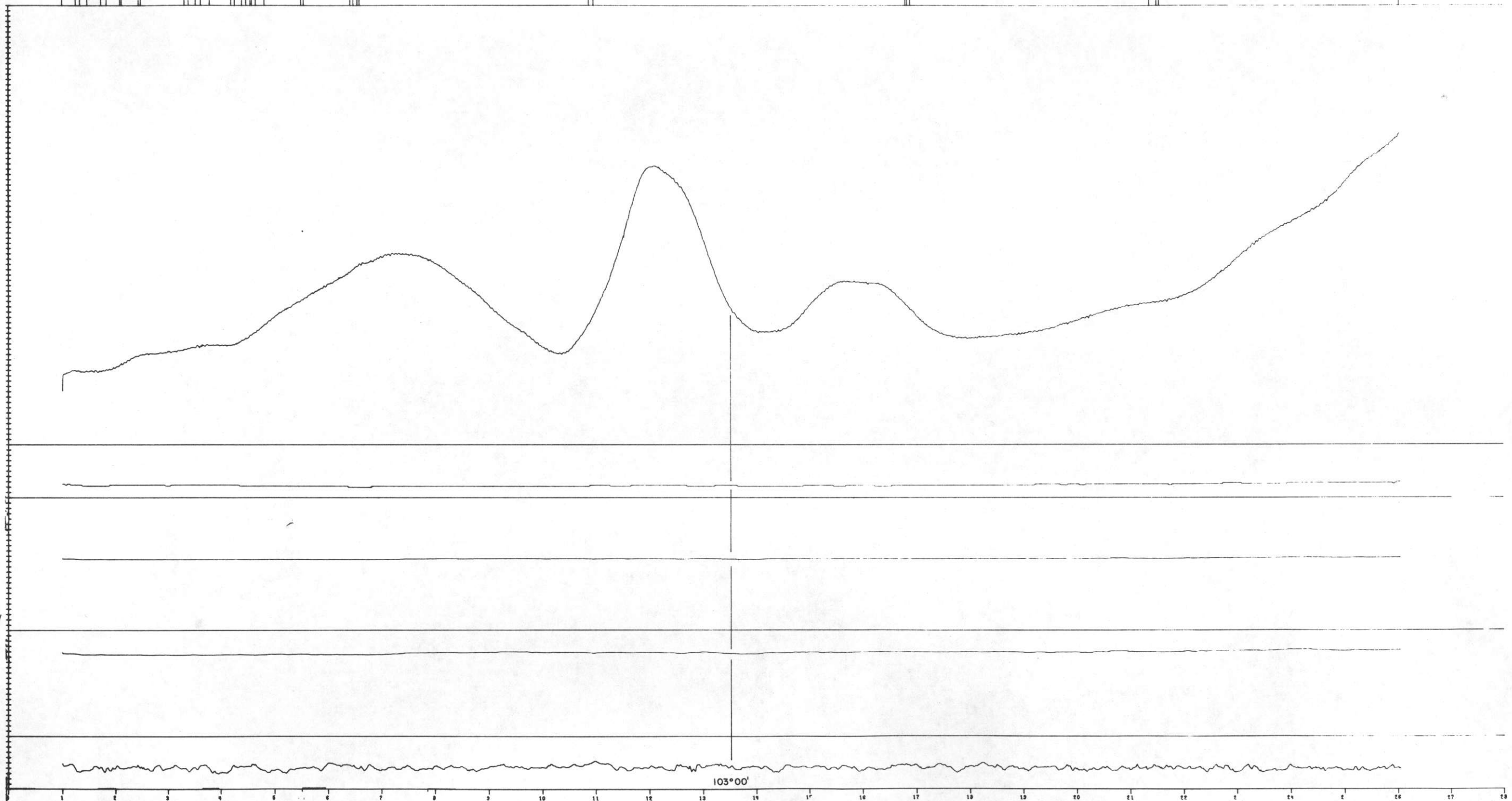
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 19

TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV

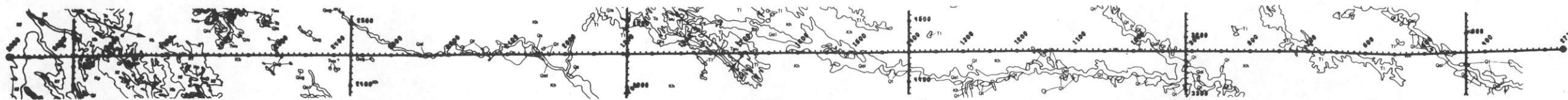


ML 7 LEMMON



103°00'





TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GMMMS/DIV  
BASE = -100

BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

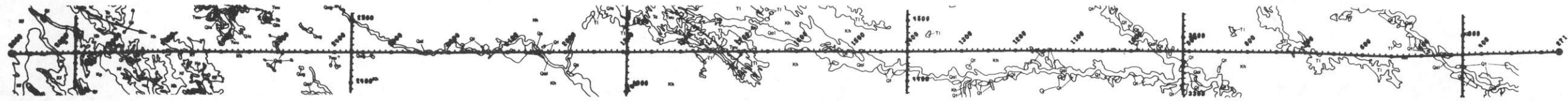
TL  
10 C/S/DIV

ALT  
100 FT/DIV

ML 8 LEMMON



103°00'



RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 10

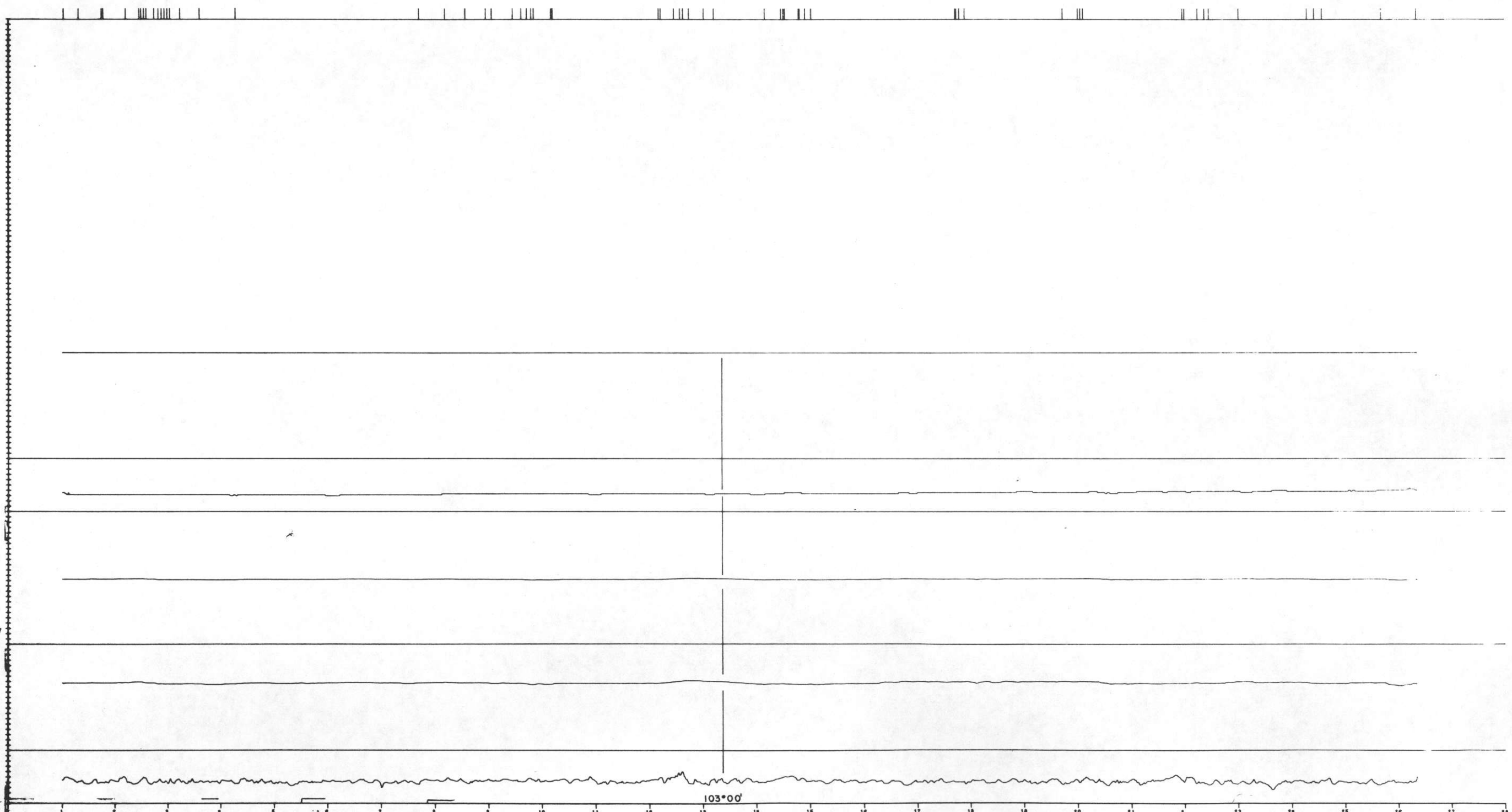
TEMP  
1 DEG C/DIV  
BASE = 15

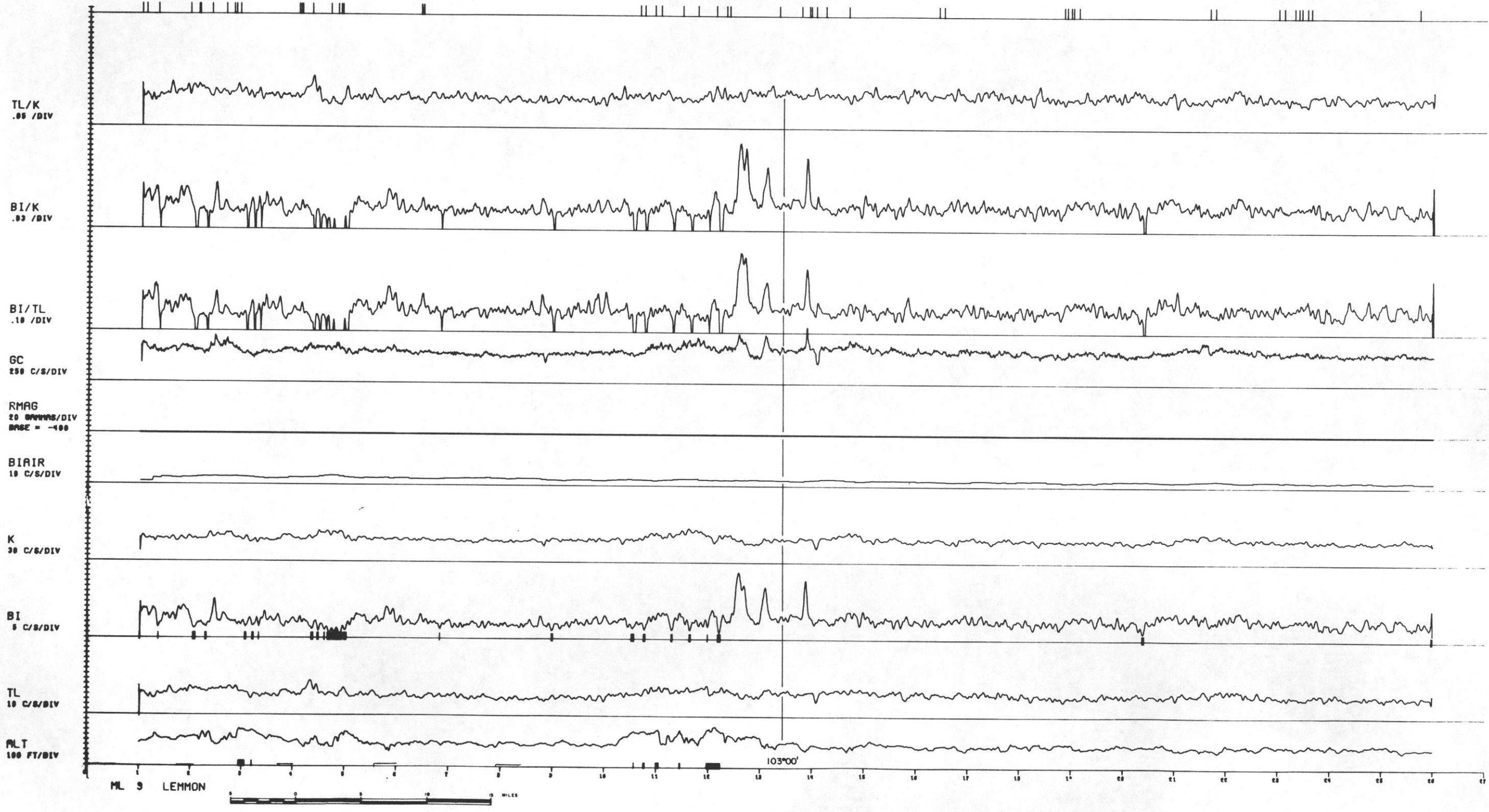
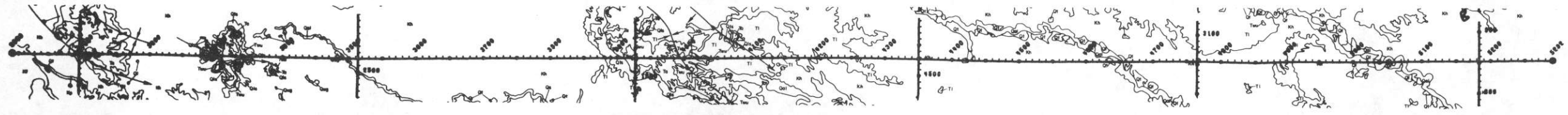
ALT  
100 FT/DIV

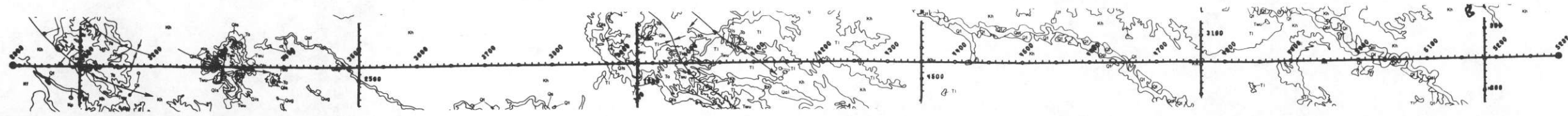
ML 8 LEMMON



103°00'







RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

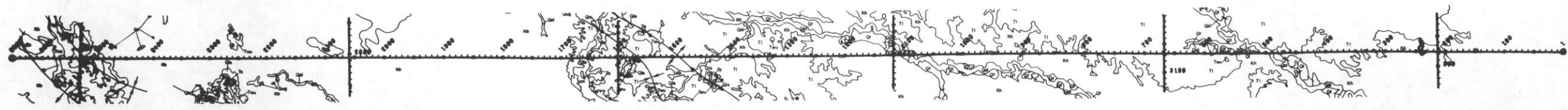
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV

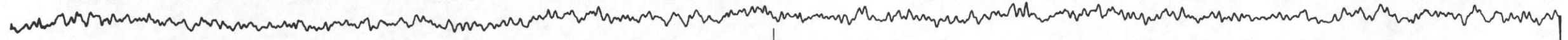
ML 9 LEMMON



103°00'



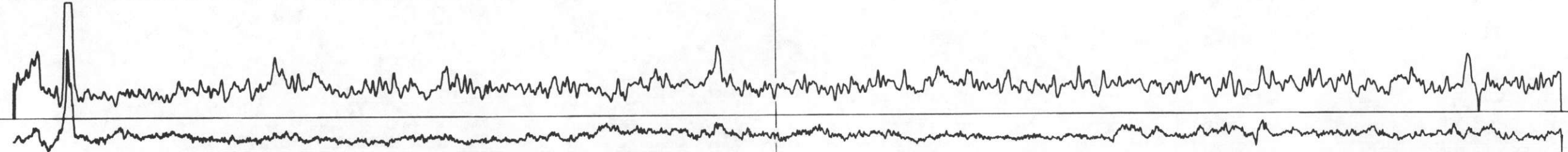
TL/K  
.05 /DIV



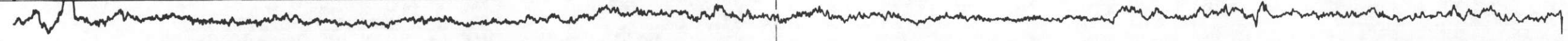
BI/K  
.02 /DIV



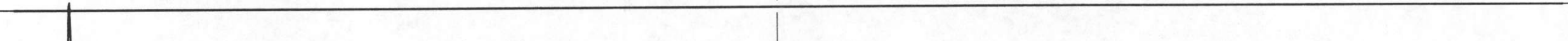
BI/TL  
.10 /DIV



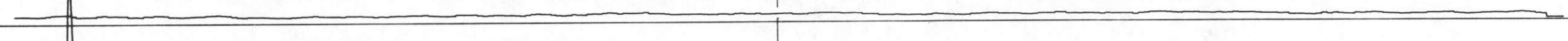
GC  
250 C/S/DIV



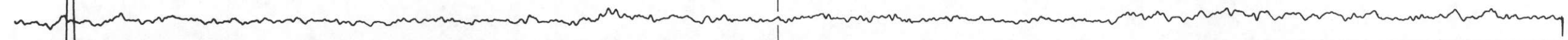
RMAG  
20 @WWS/DIV  
BASE = -1.50



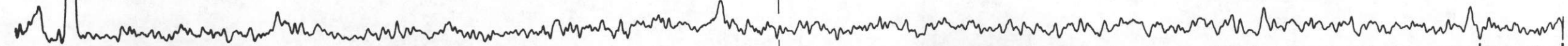
BIAIR  
10 C/S/DIV



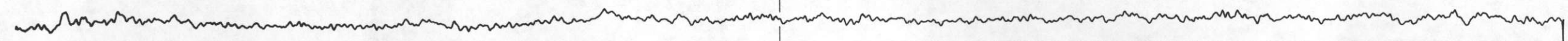
K  
30 C/S/DIV



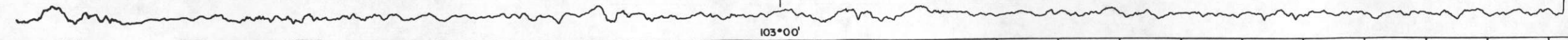
BI  
5 C/S/DIV



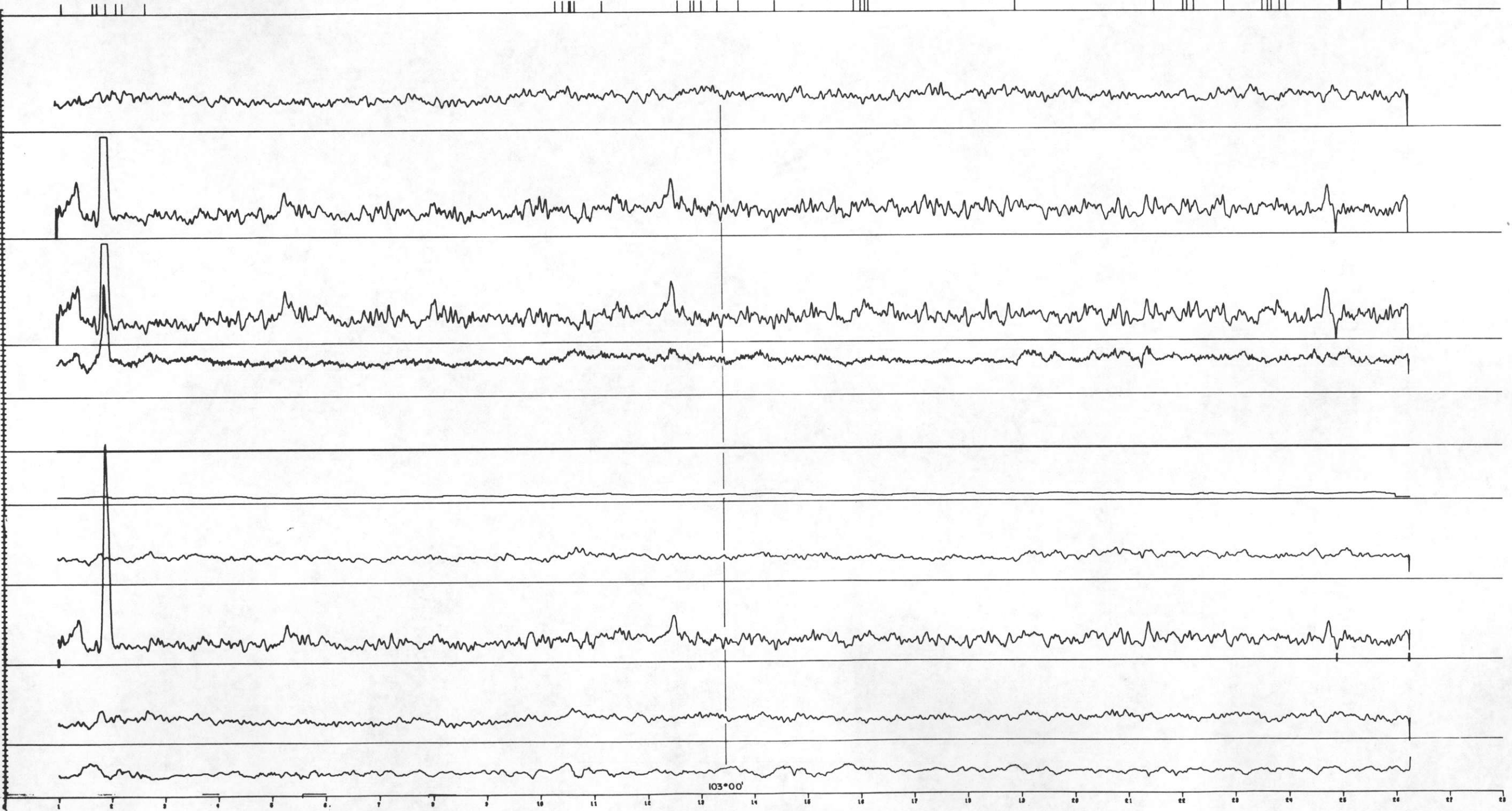
TL  
10 C/S/DIV

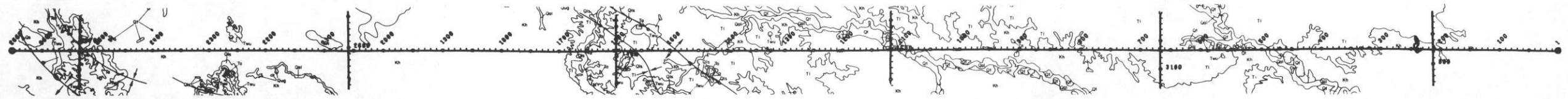


MLT  
100 FT/DIV



103°00'





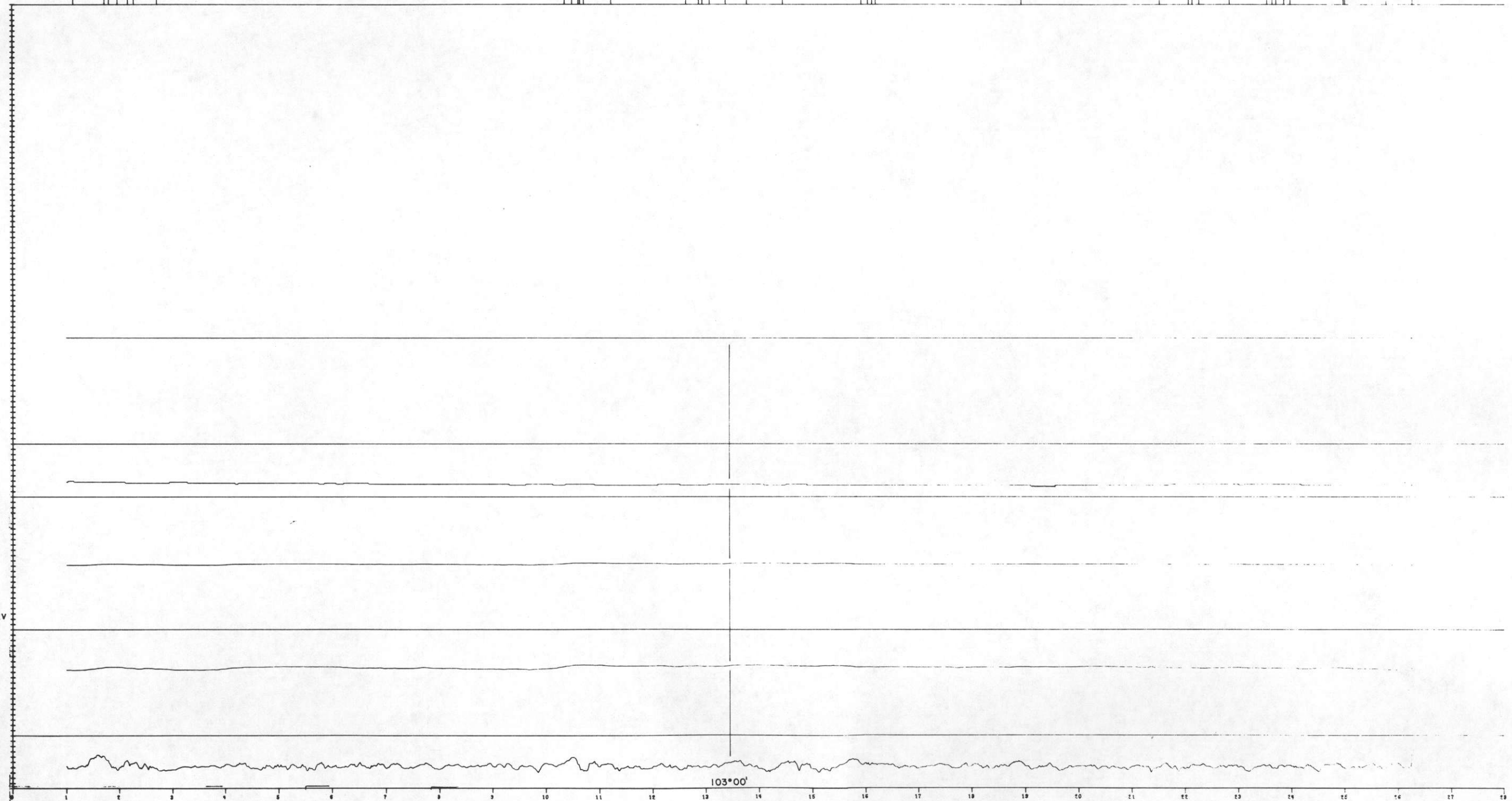
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 19

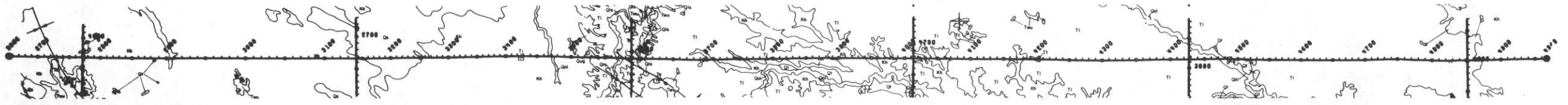
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



ML 10 LEMMON





TL/K  
.05 /DIV

BI/K  
.05 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAUSS/DIV  
BASE = -100

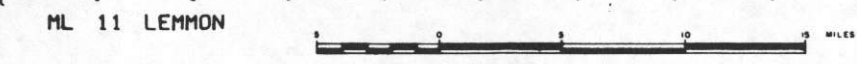
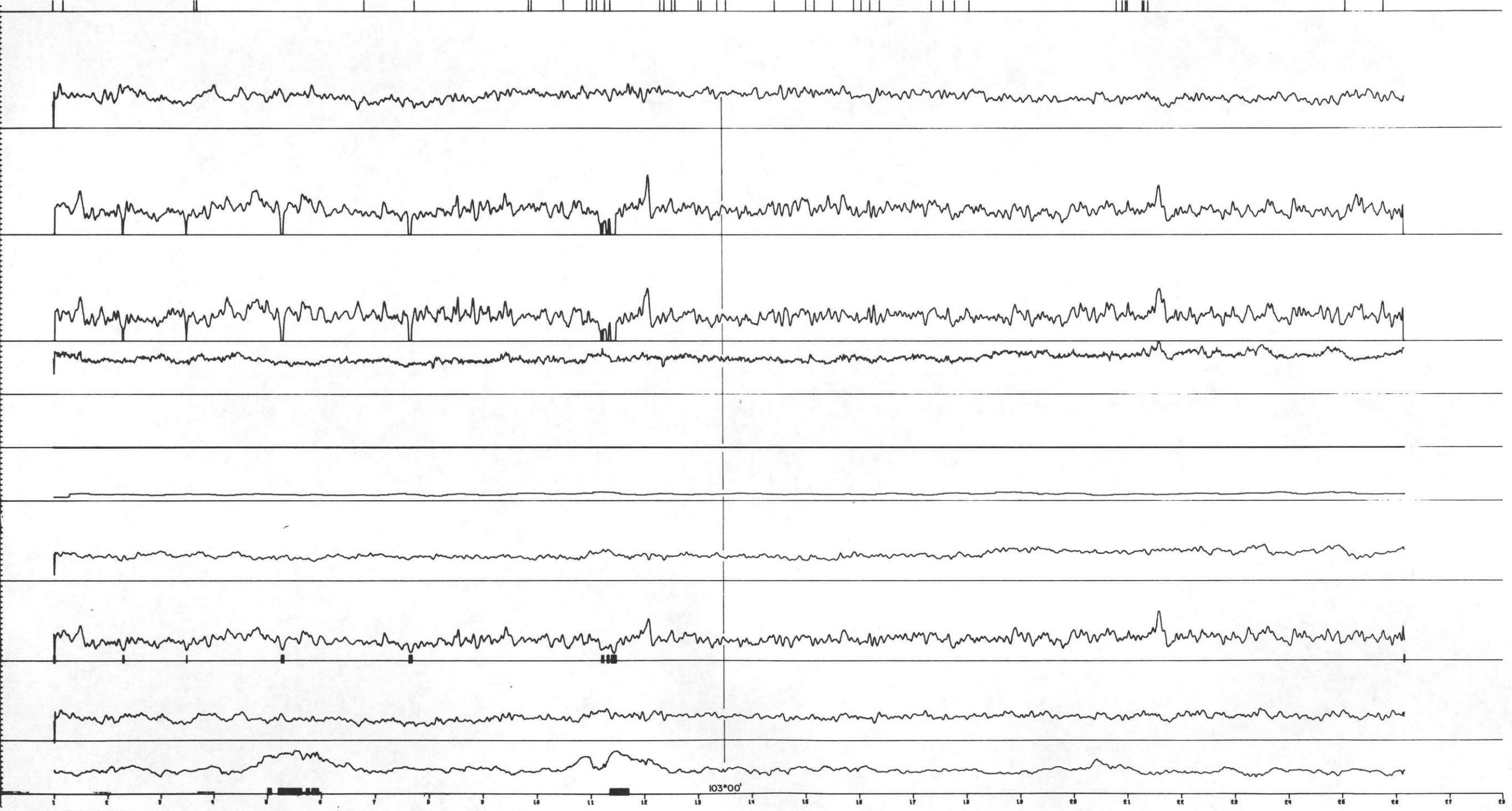
BIAIR  
10 C/S/DIV

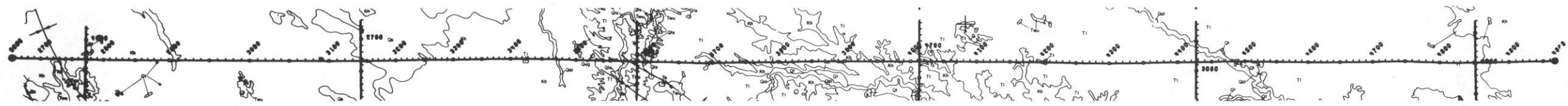
K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

ALT  
100 FT/DIV





RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 10

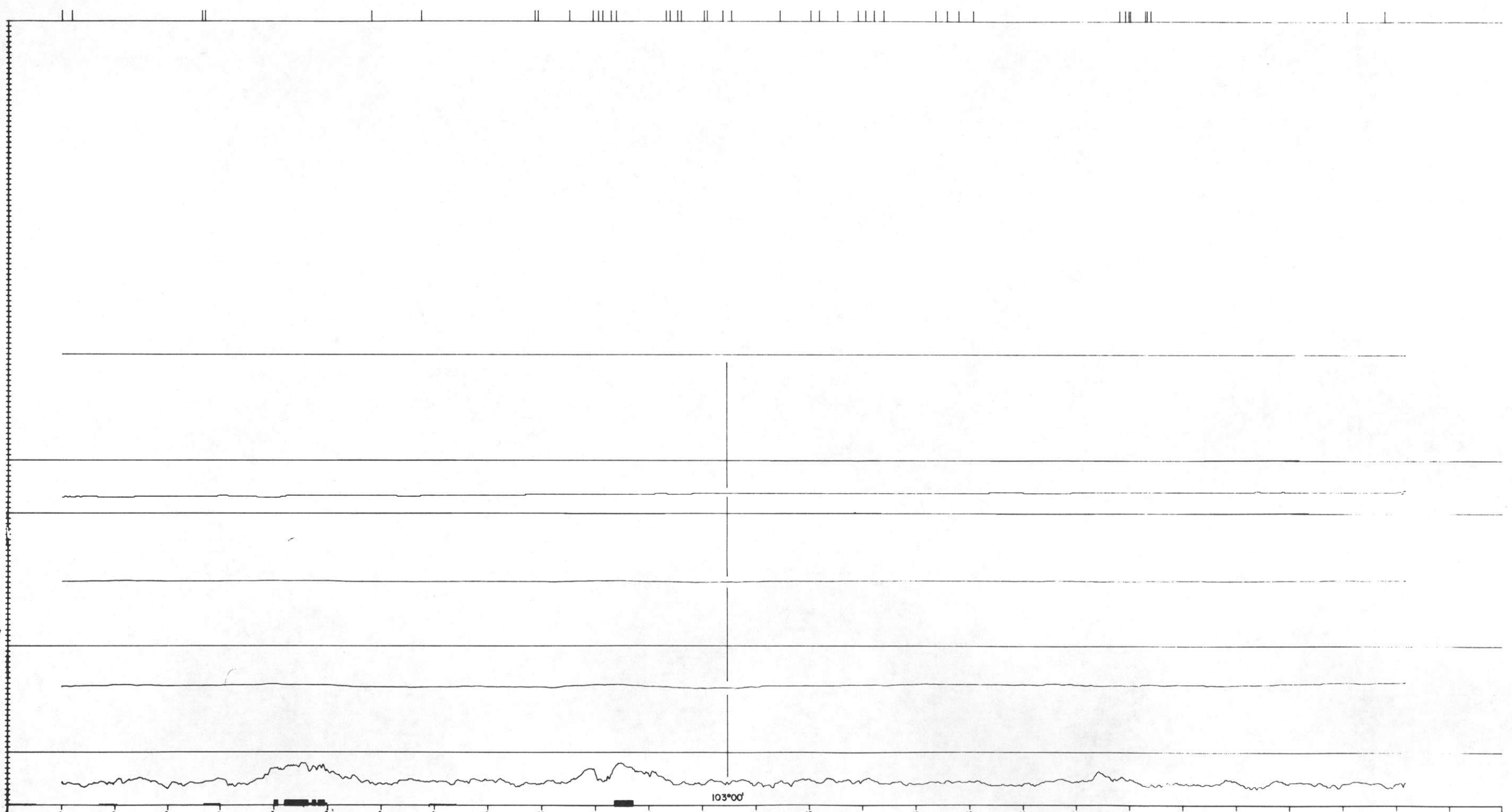
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV

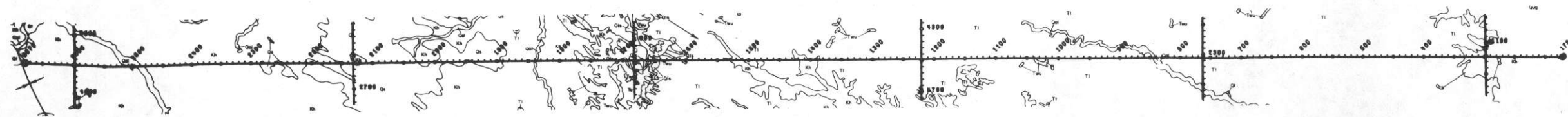
ML 11 LEMMON

0 5 10 15 MILES

103°00'







TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

BIAIR  
10 C/S/DIV

F  
30 C/S/DIV

BI  
5 C/S/DIV

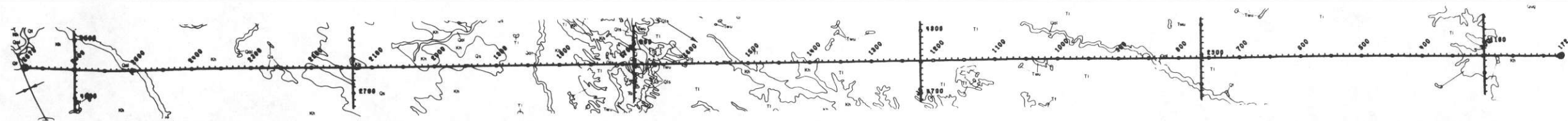
TL  
10 C/S/DIV

ALT  
100 FT/DIV

ML 12 LEMMON



103°00'



1.5G  
10 GAMMA/DIV  
BASE = 600

BMAG  
5 GAMMA/DIV  
BASE = 57915

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

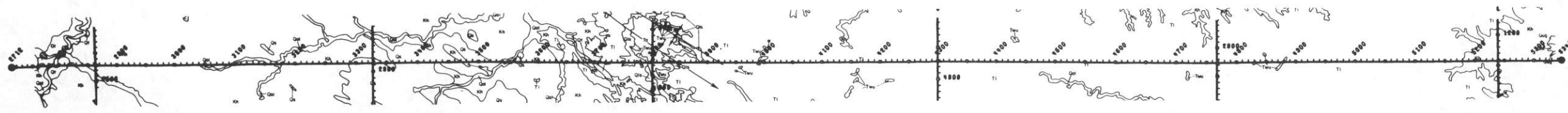
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV

ML 12 LEMMON



103°00'



TL/K  
.05 /DIV

BT/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

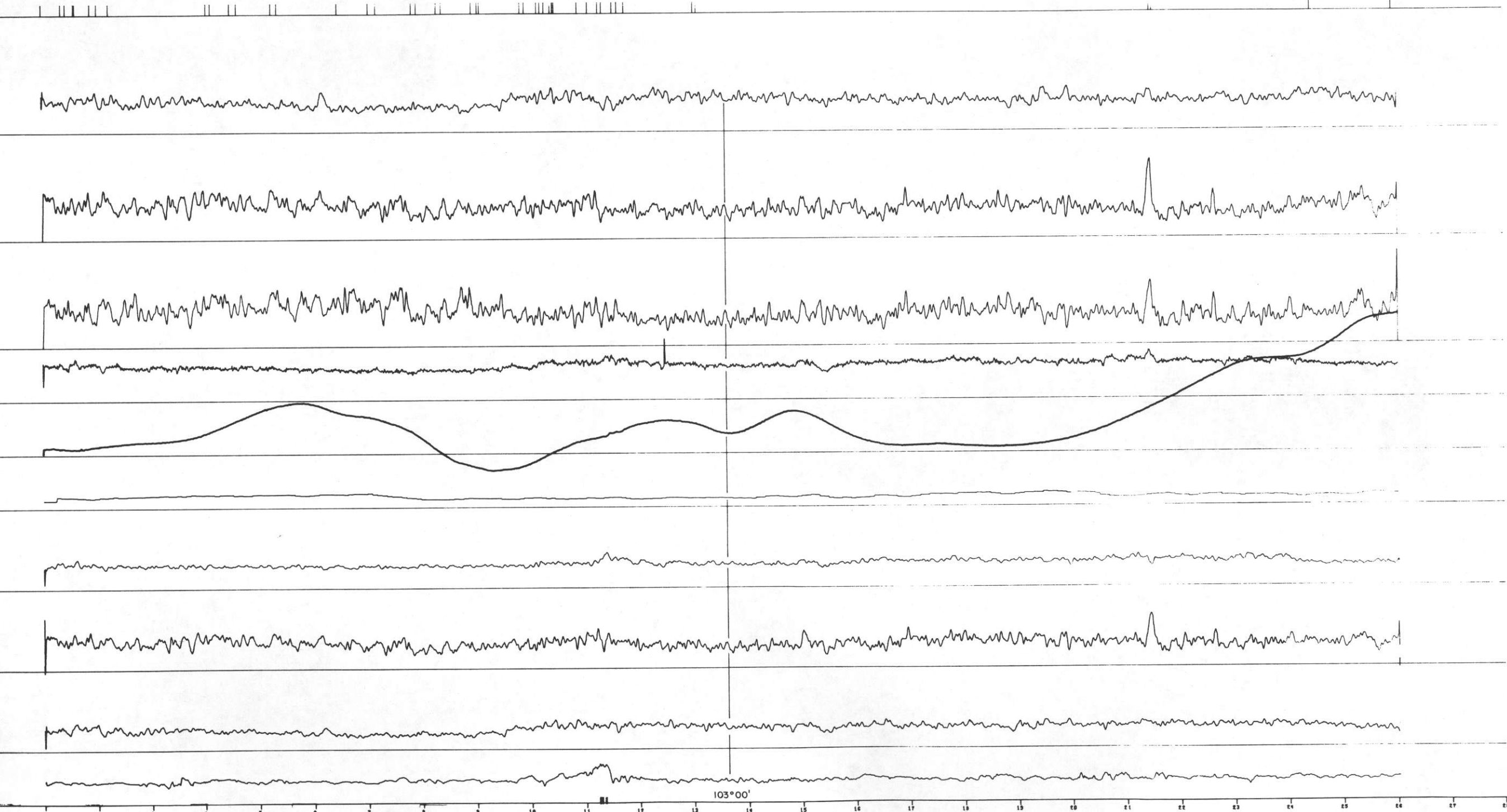
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

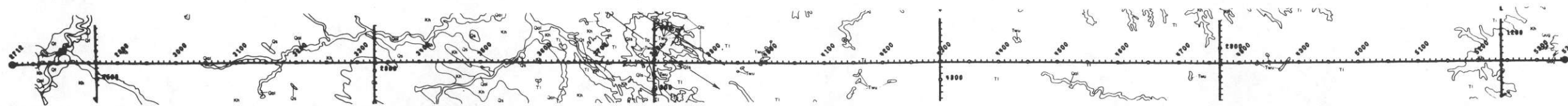
ALT  
100 FT/DIV



ML 13 LEMMON



103° 00'



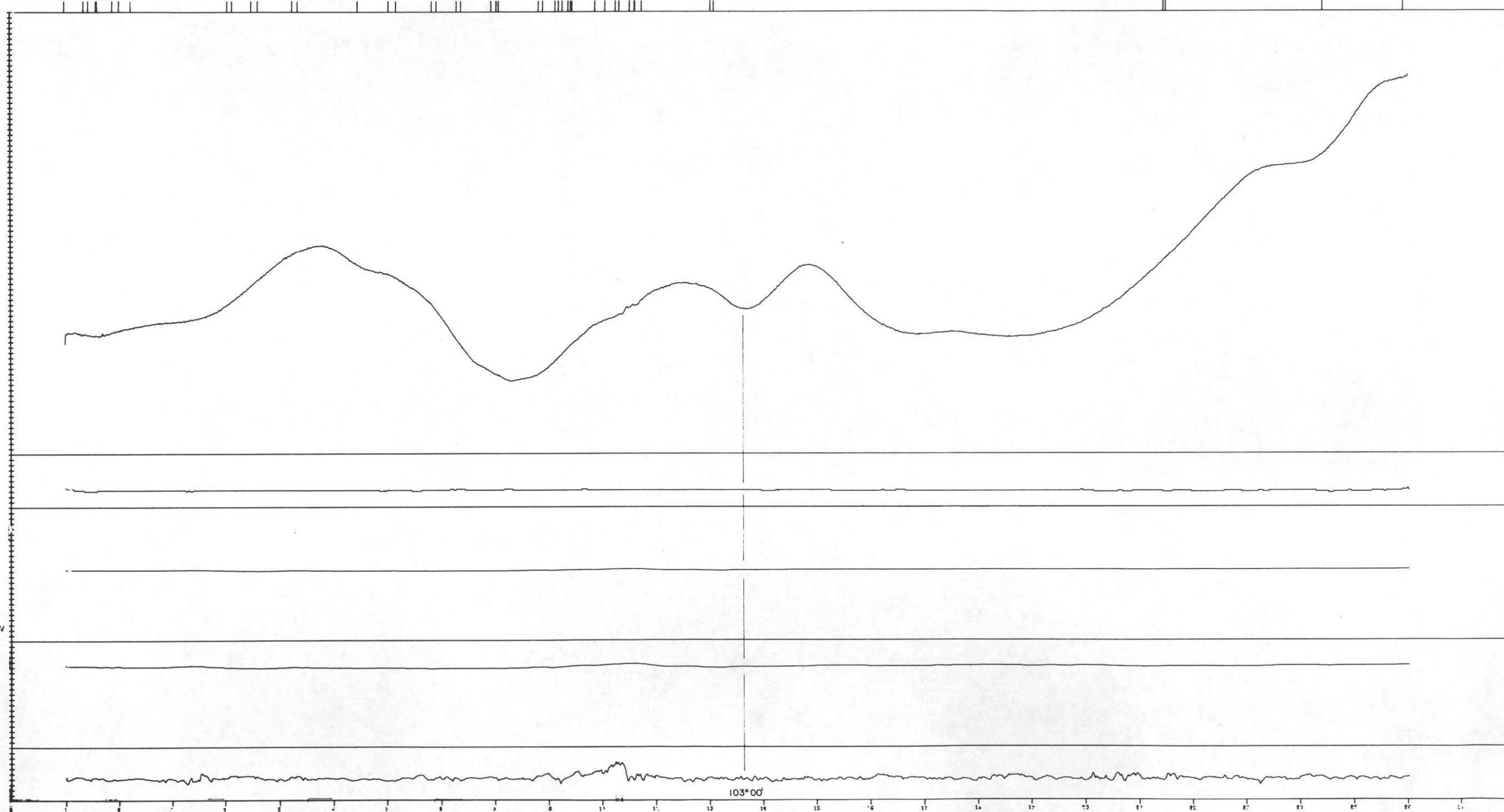
RMAG  
10 GAMMA/DIV  
BASE = -630

3.1HG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 1

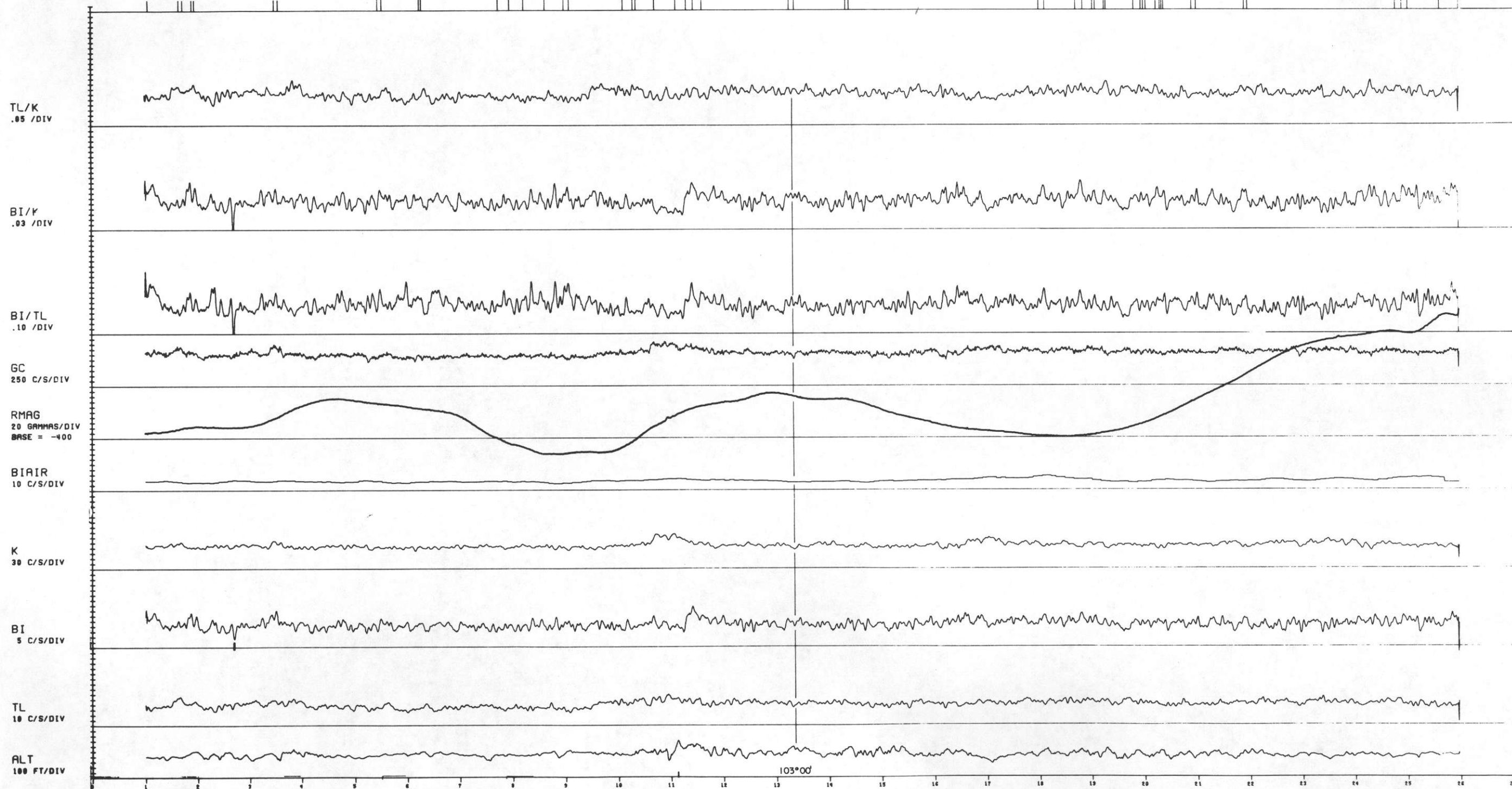
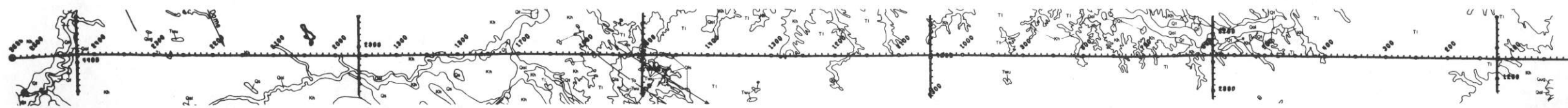
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



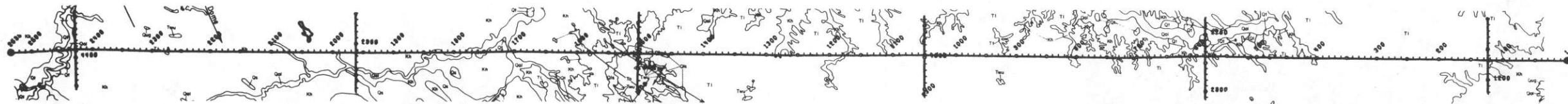
ML 13 LEMMON





ML 14 LEMMON

0 5 10 MILES



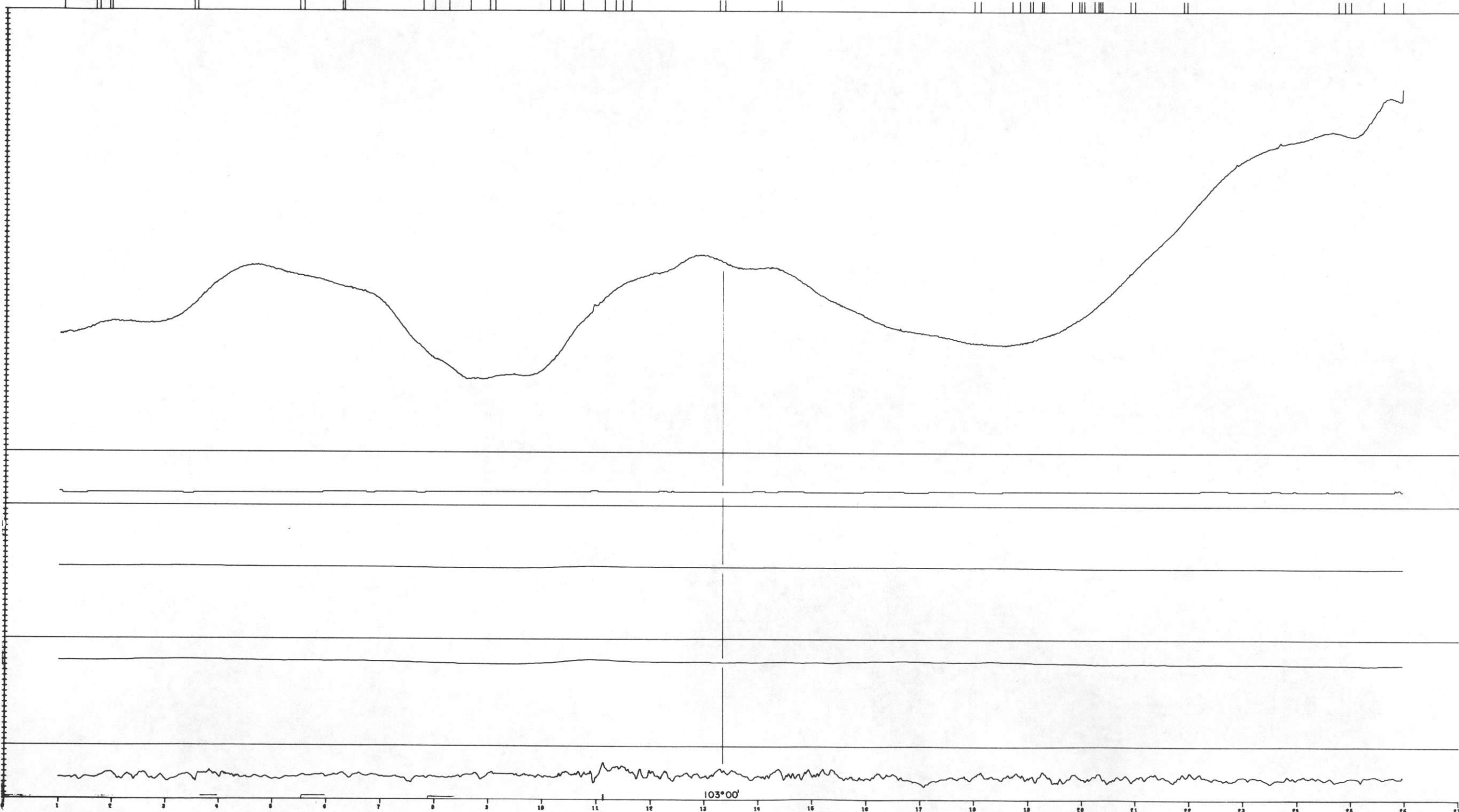
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

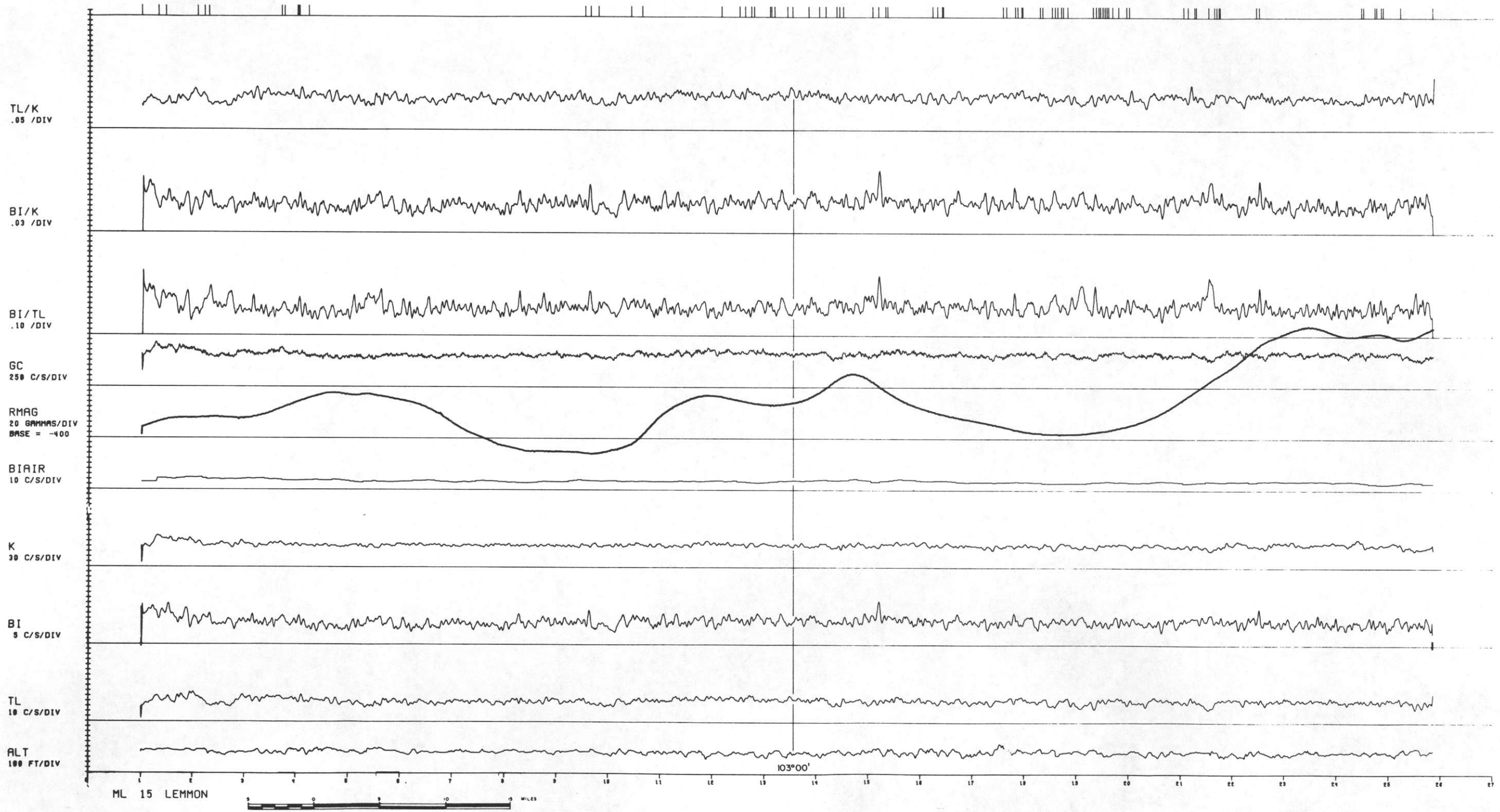
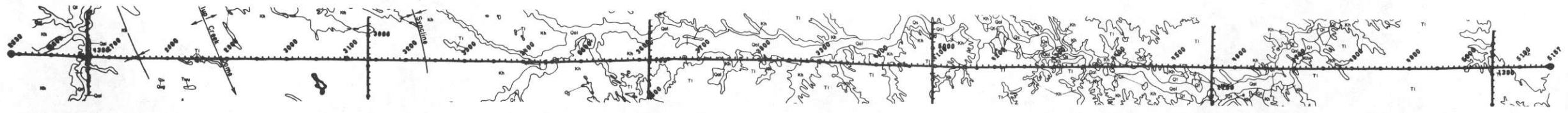
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



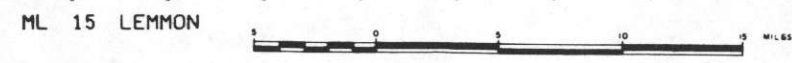
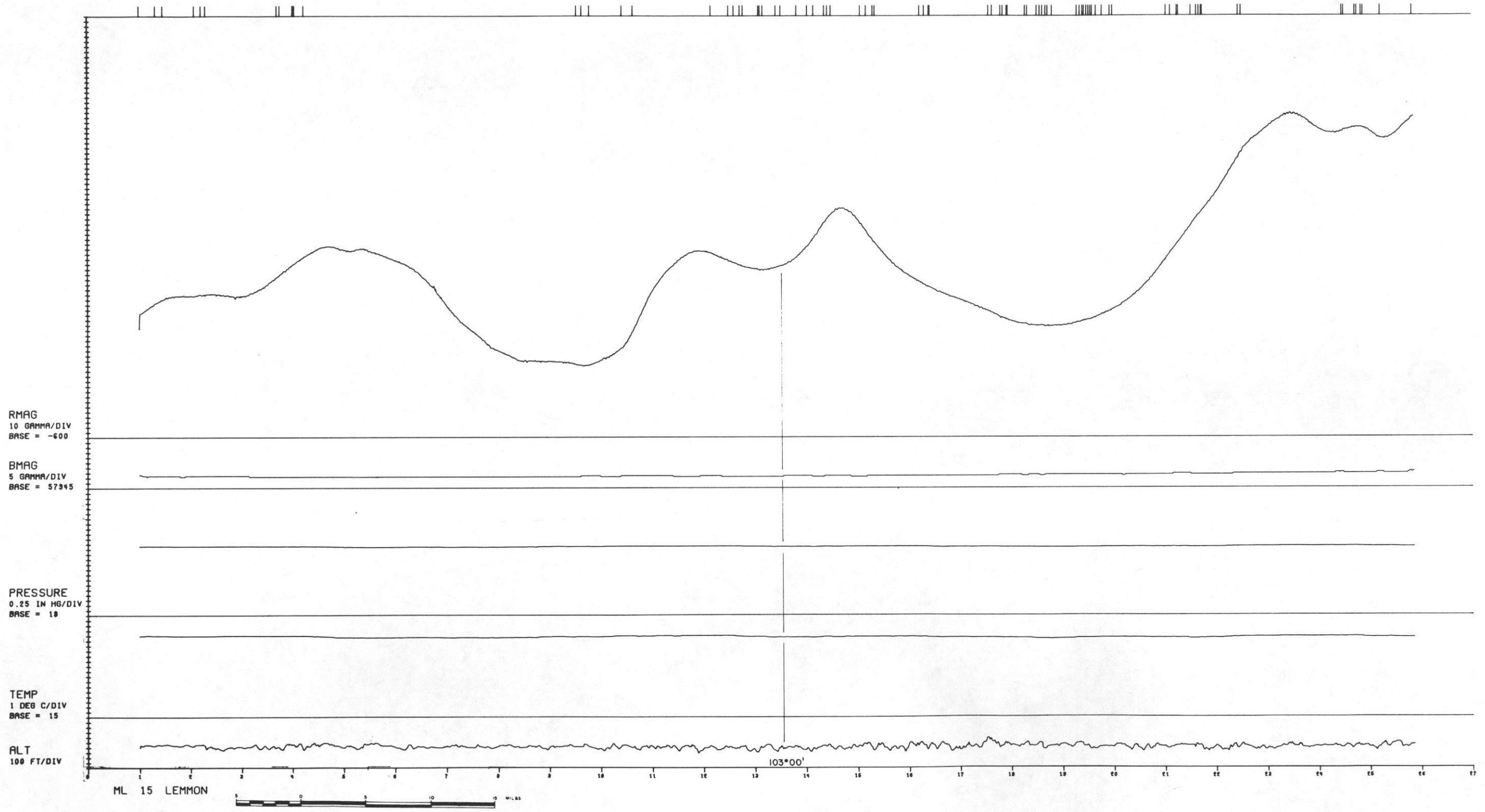
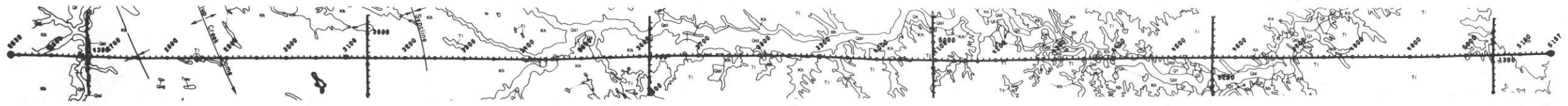
ML 14 LEMMON



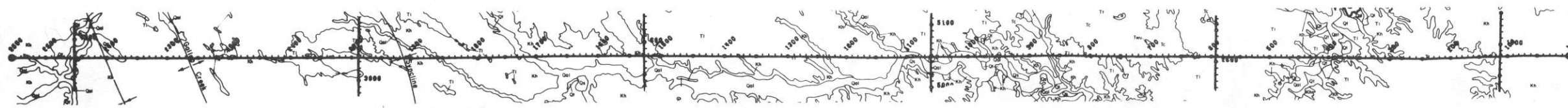


ML 15 LEMMON









TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

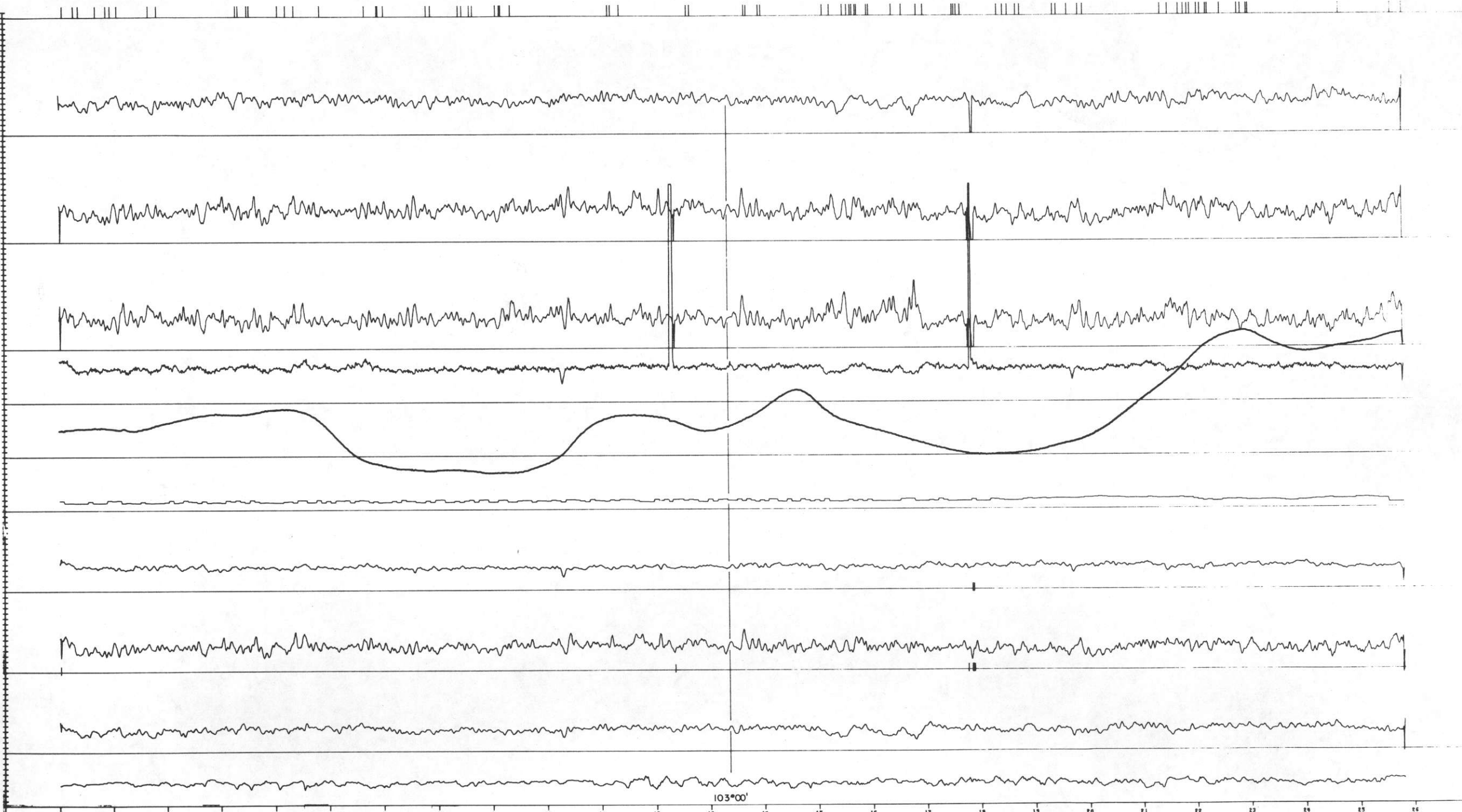
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

ALT  
100 FT/DIV

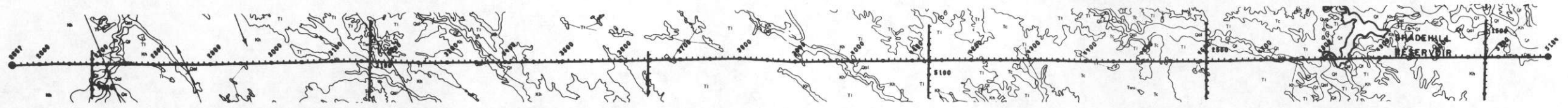


ML 16 LEMMON



103°00'





TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -100

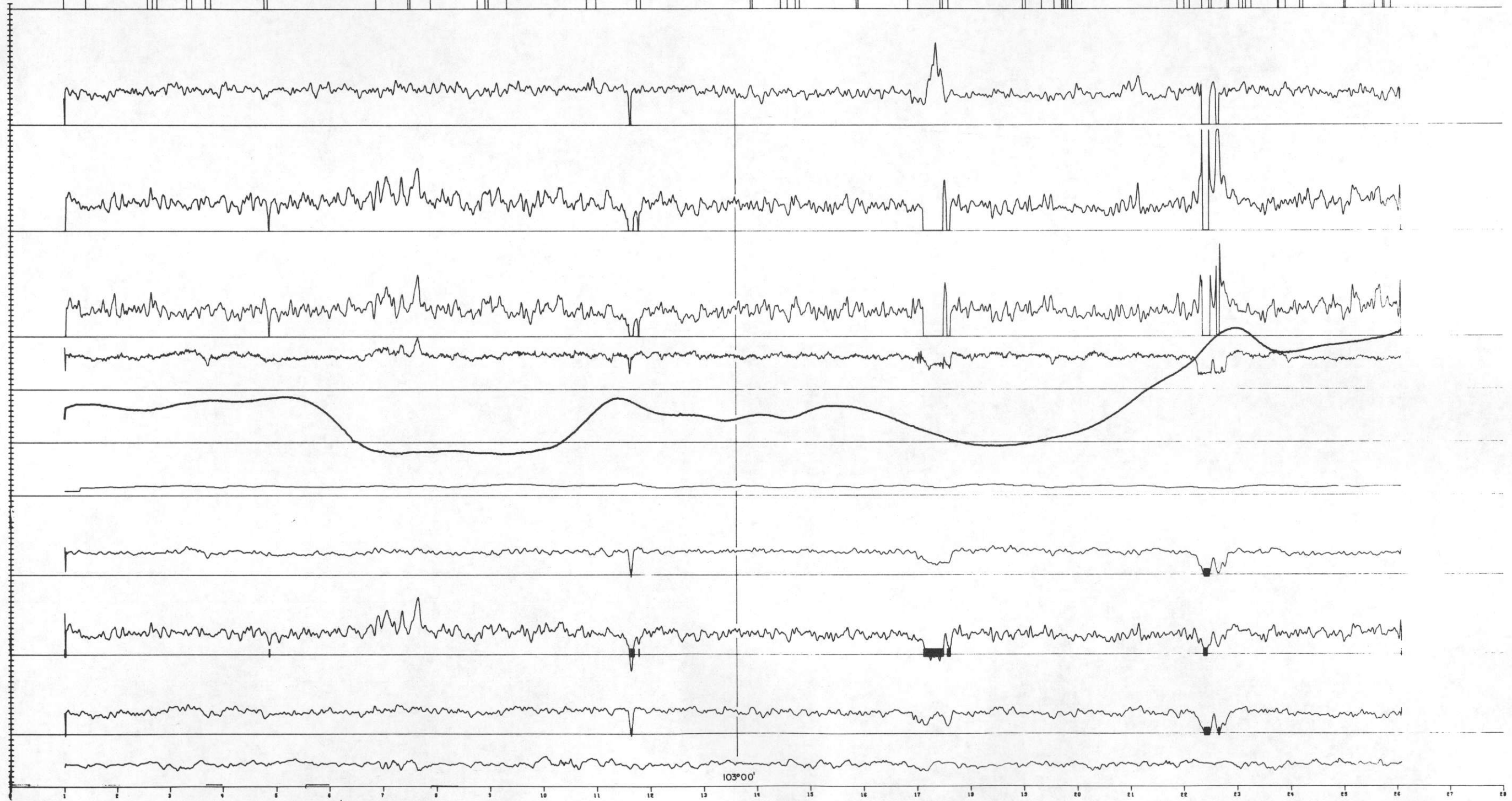
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

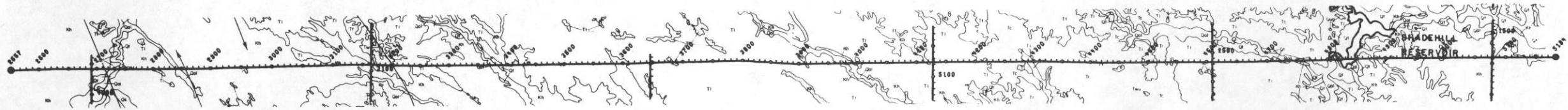
ALT  
100 FT/DIV



ML 17 LEMMON



103°00'



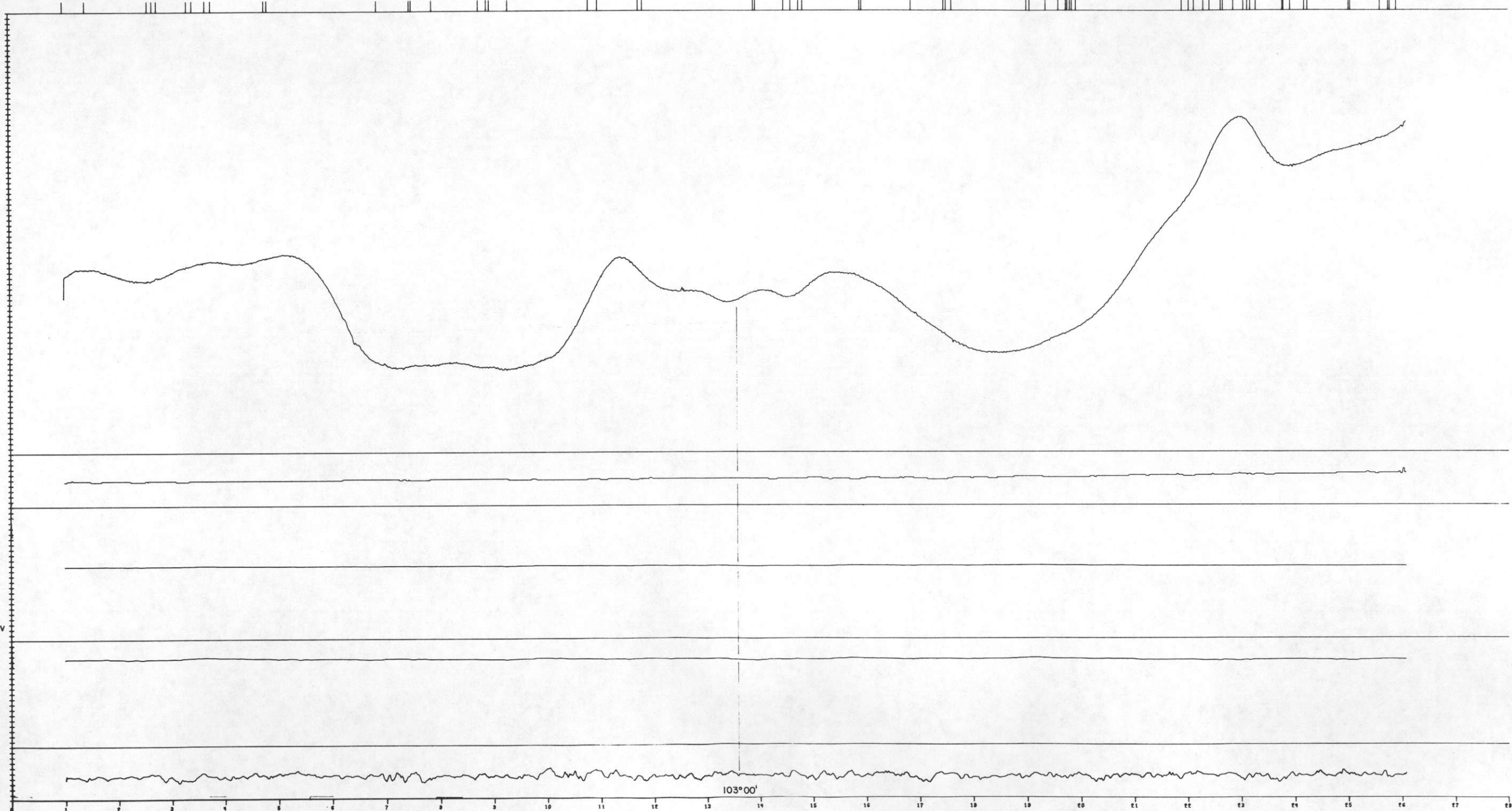
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

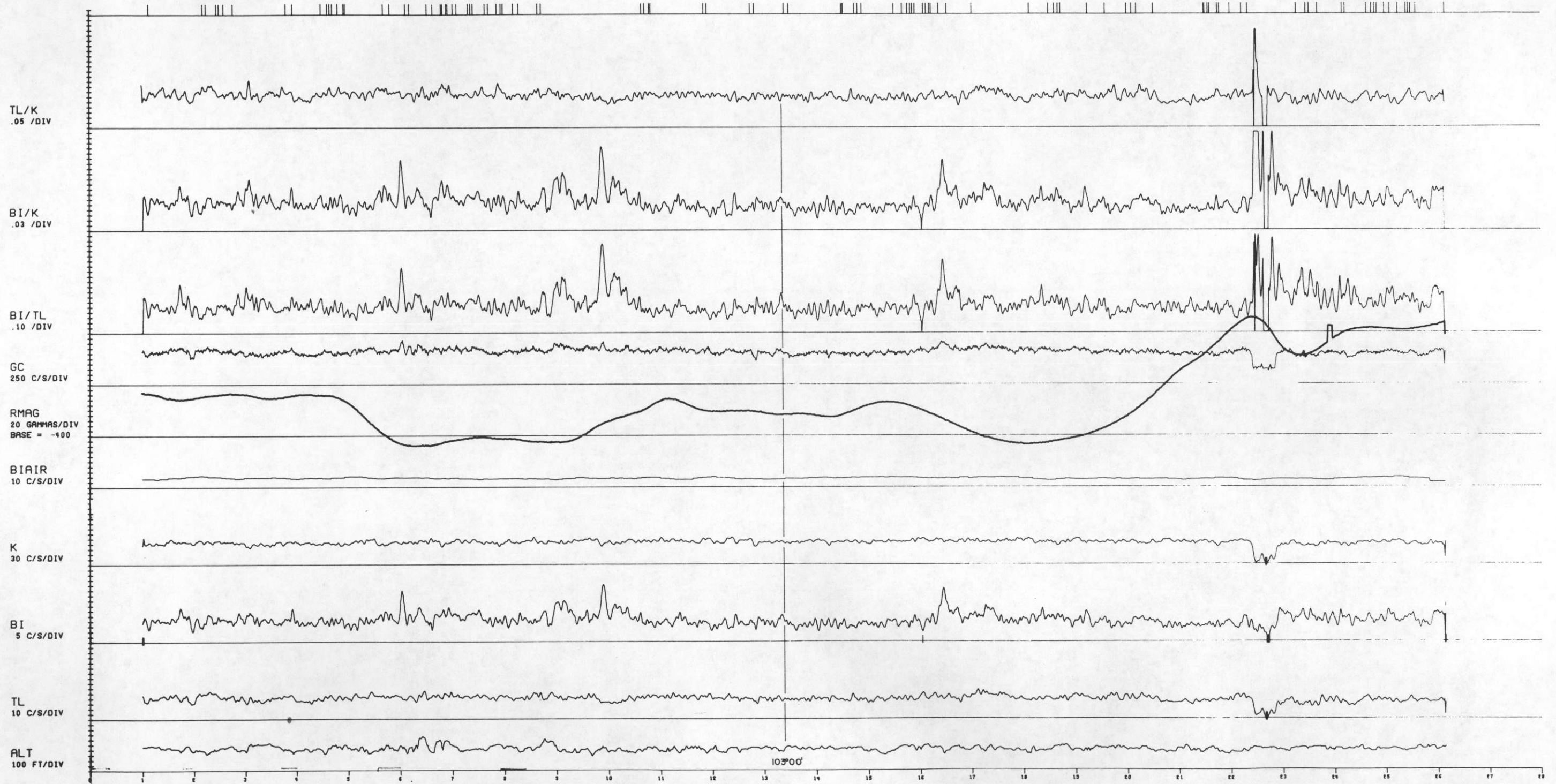
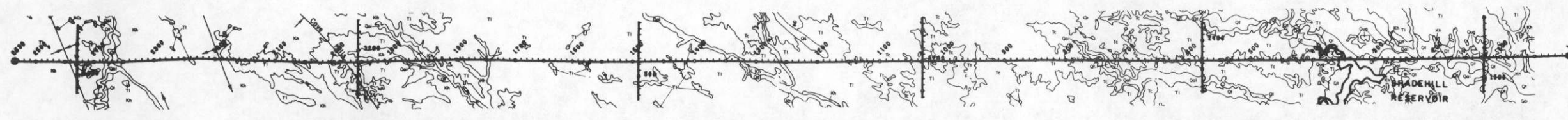
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



ML 17 LEMMON

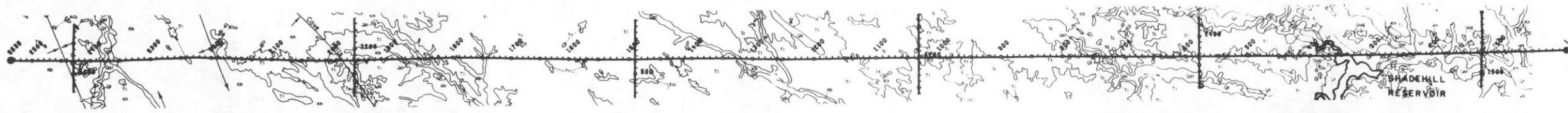




ML 18 LEMMON



103°00'



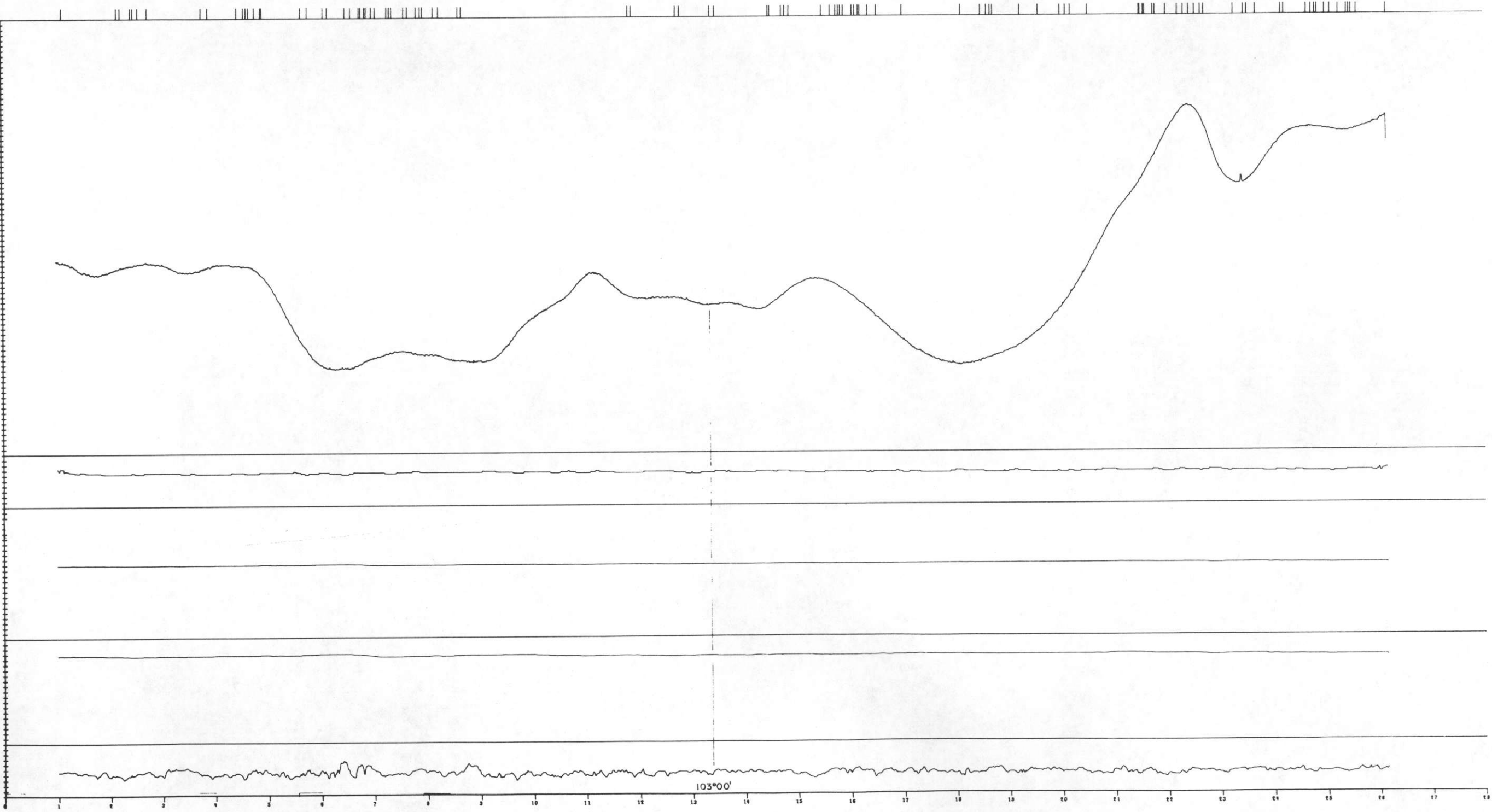
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

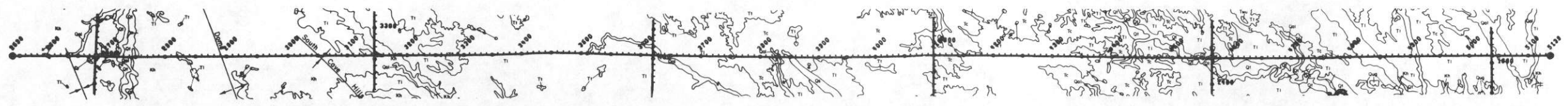
ALT  
100 FT/DIV



ML 18 LEMMON



103°00'



TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

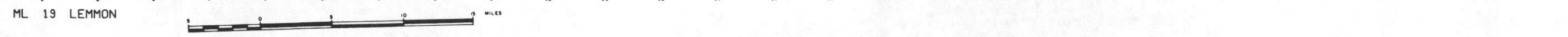
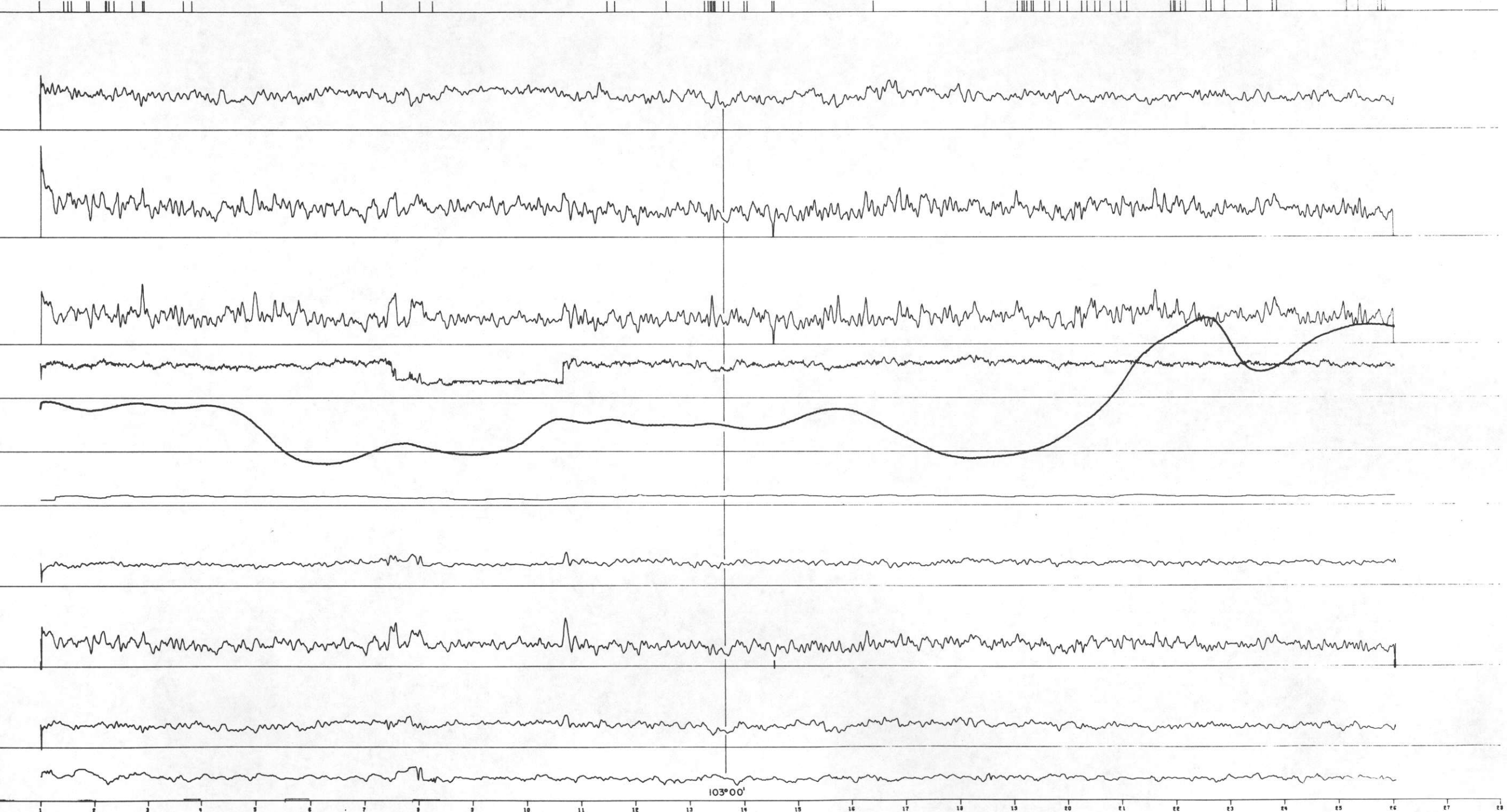
BIAIR  
10 C/S/DIV

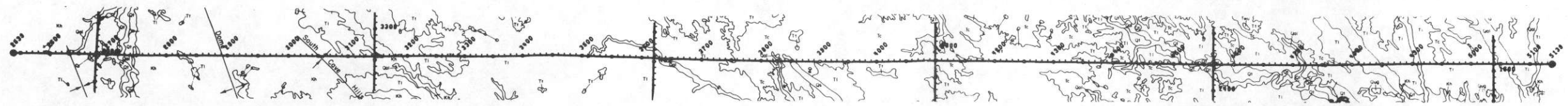
K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

ALT  
100 FT/DIV





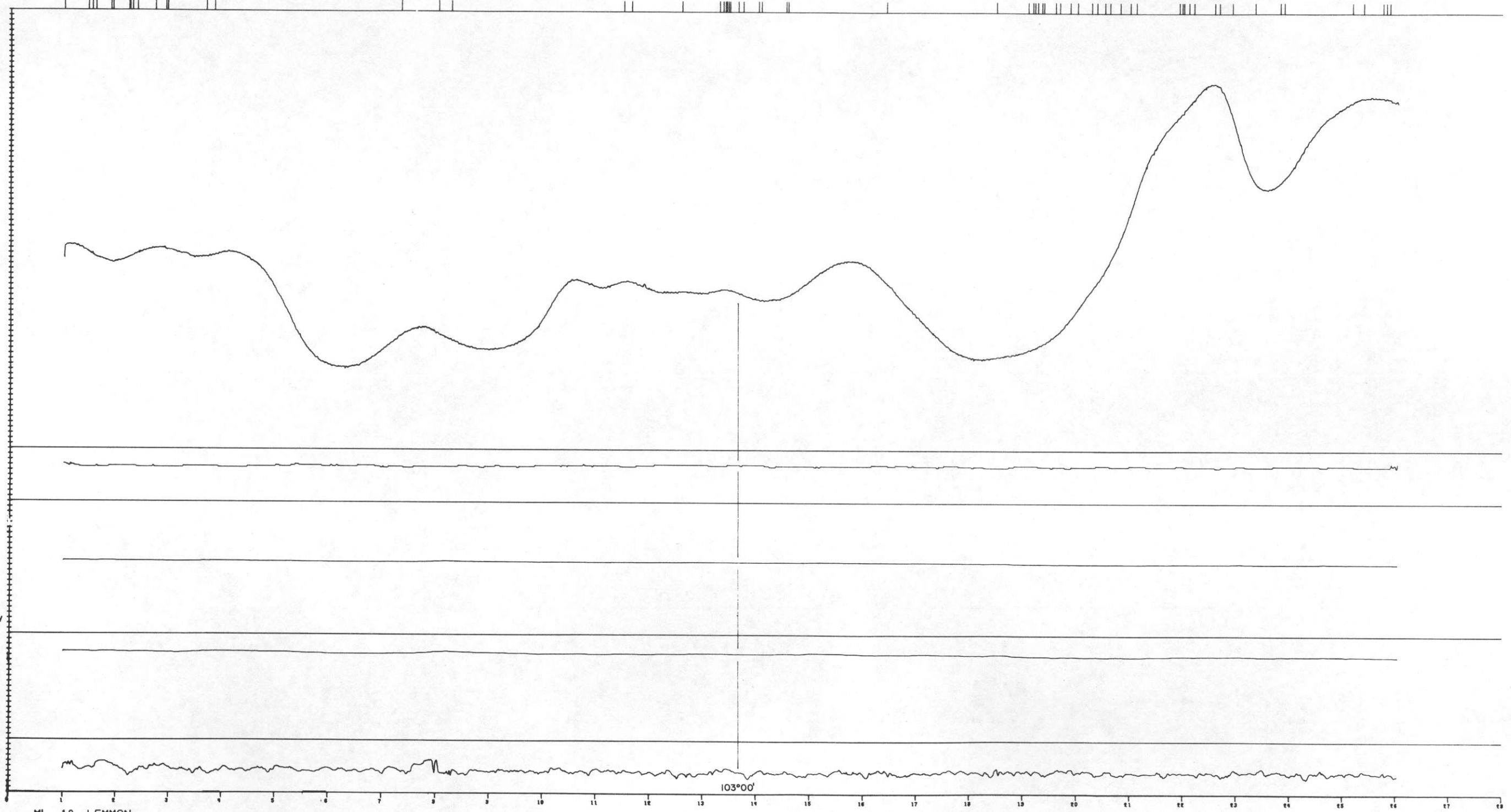
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV

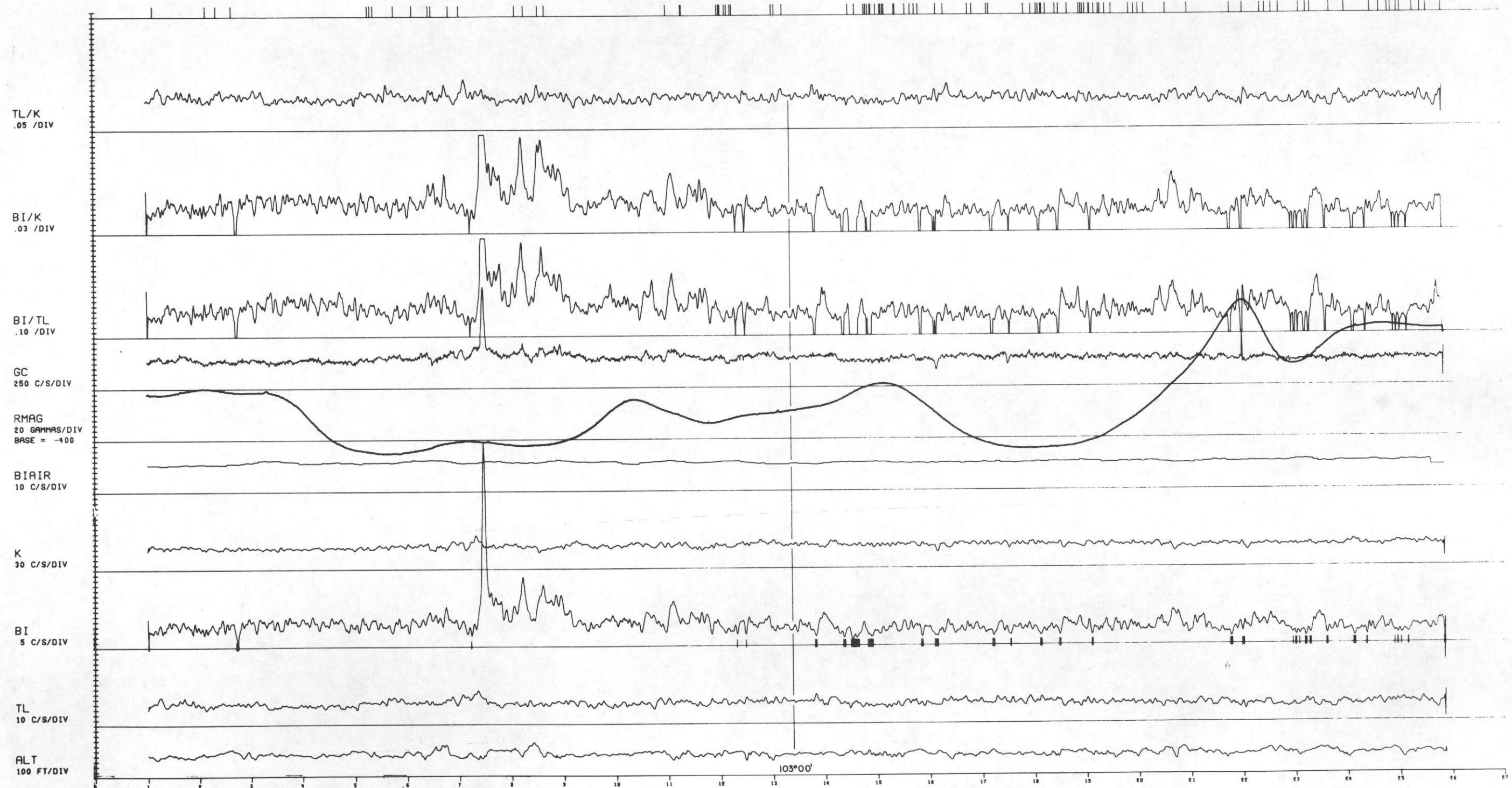
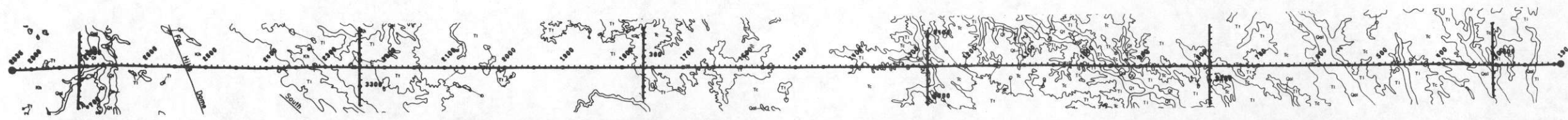


ML 19 LEMMON



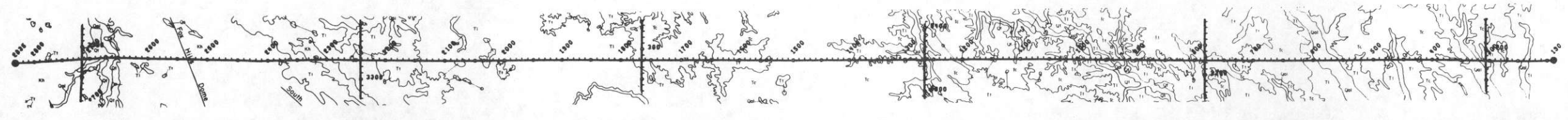
103°00'





ML 20 LEMMON

A horizontal scale bar with vertical tick marks every 1 mile, labeled from 0 to 20. The word "MILES" is written at the end of the bar.



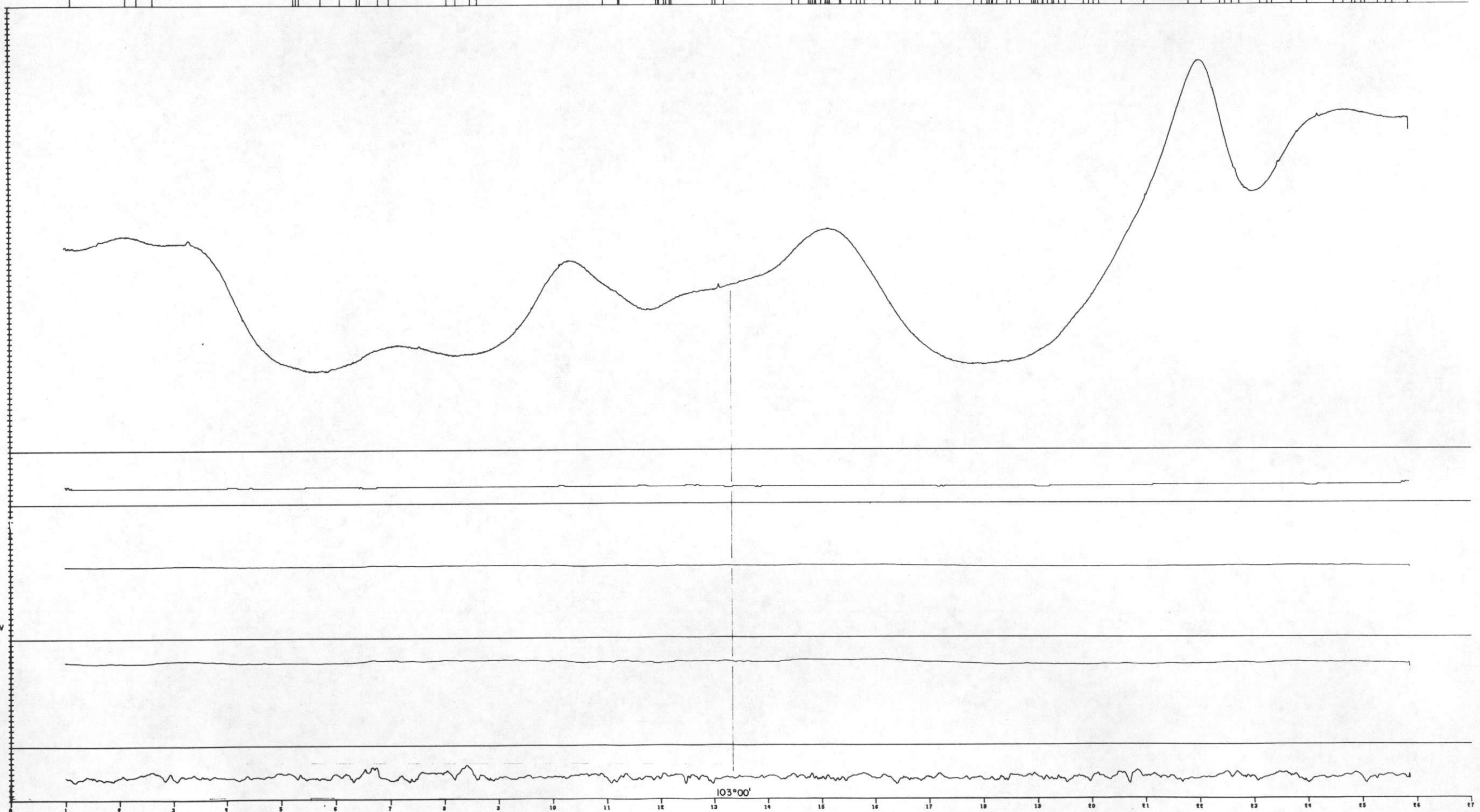
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

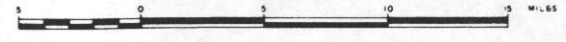
PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

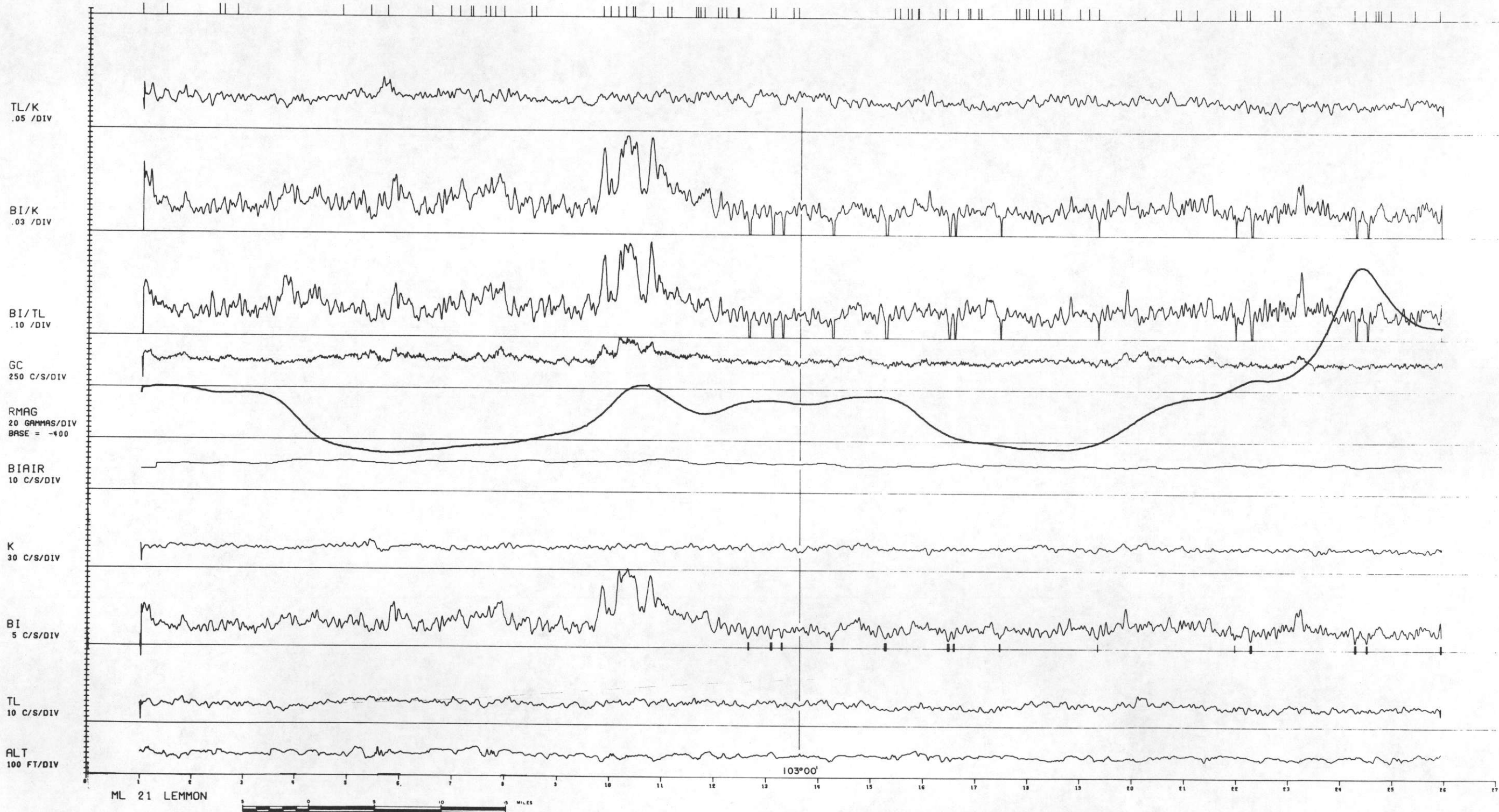
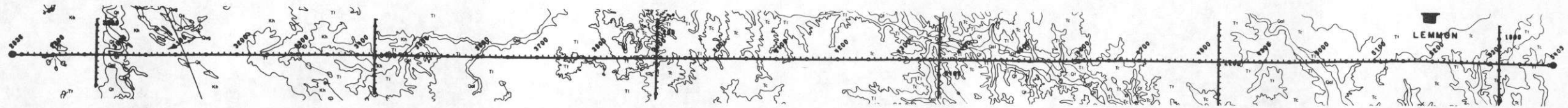
ALT  
100 FT/DIV

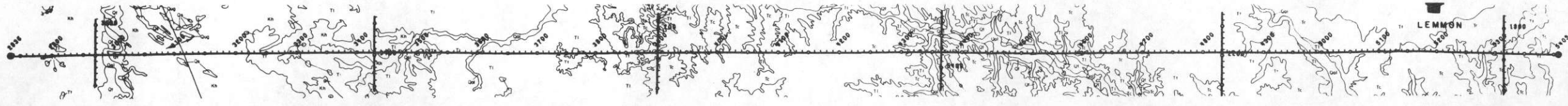


ML 20 LEMMON



103°00'





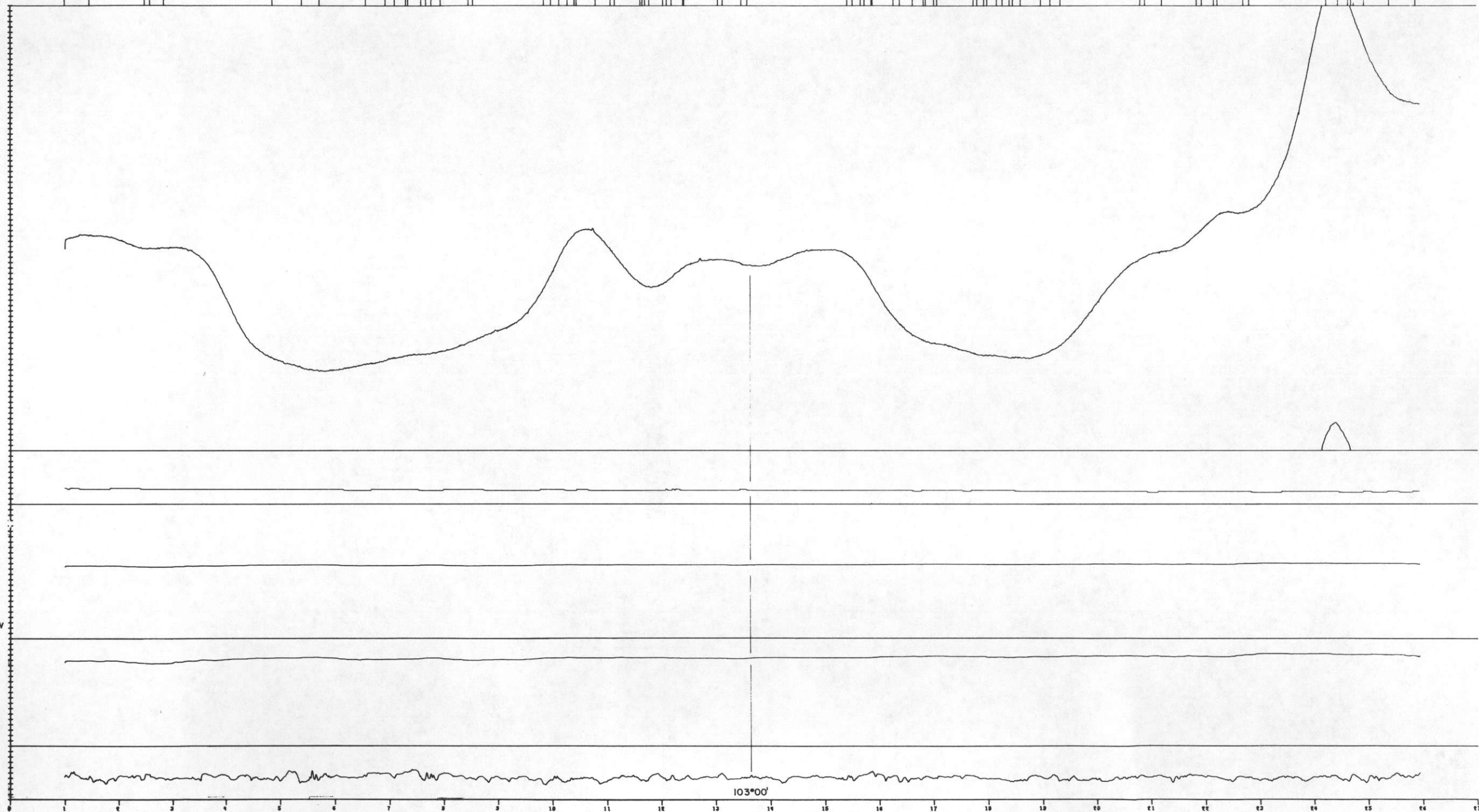
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 19

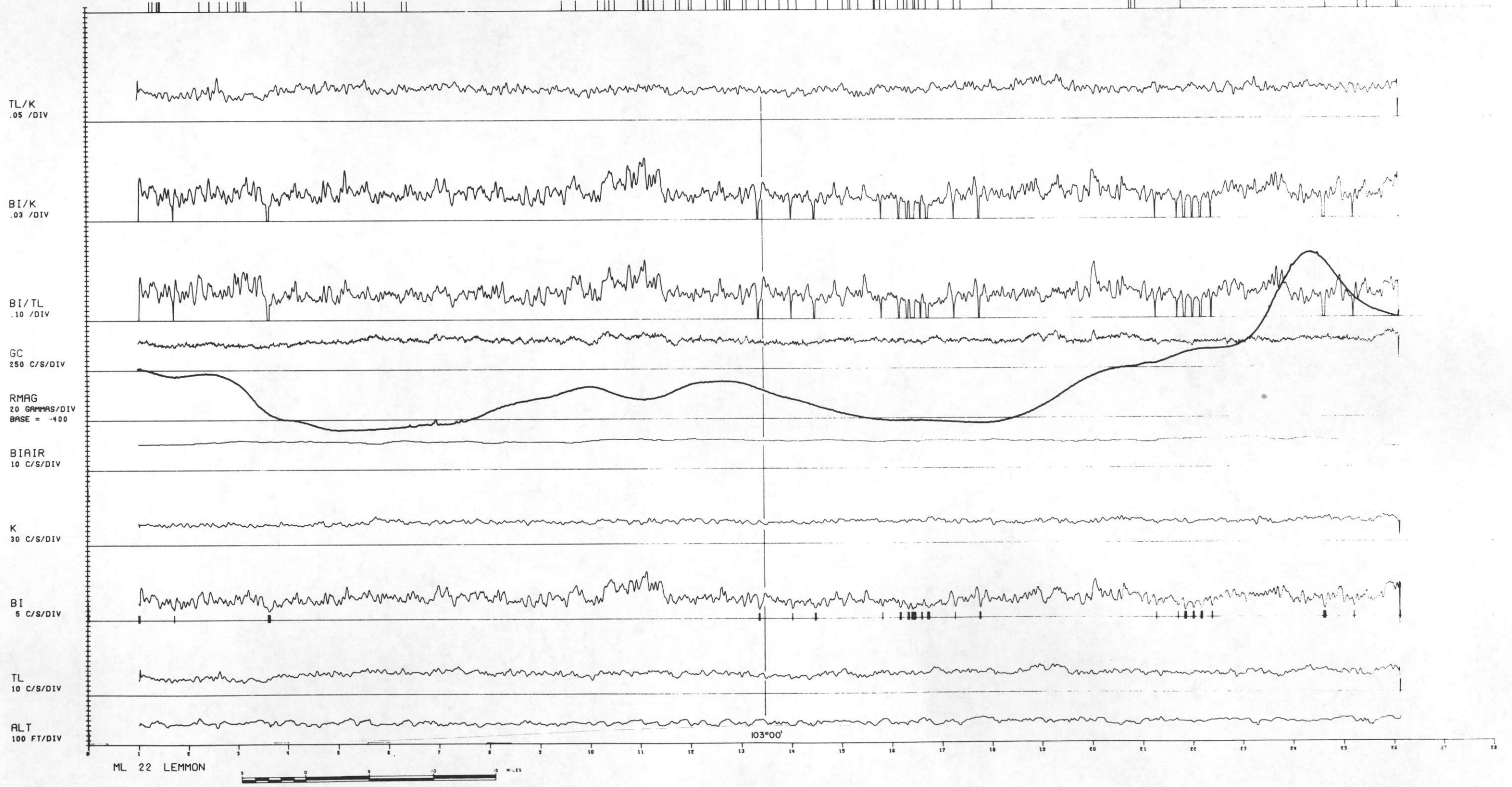
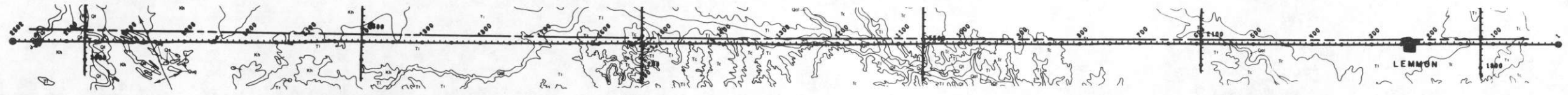
TEMP  
1 DEG C/DIV  
BASE = 15

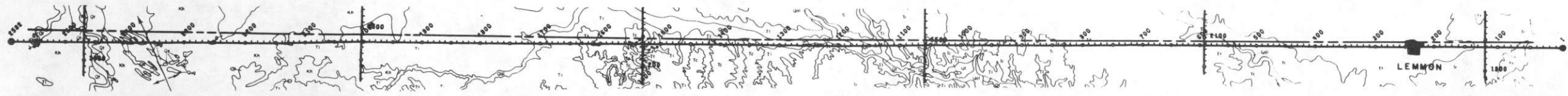
ALT  
100 FT/DIV



ML 21 LEMMON







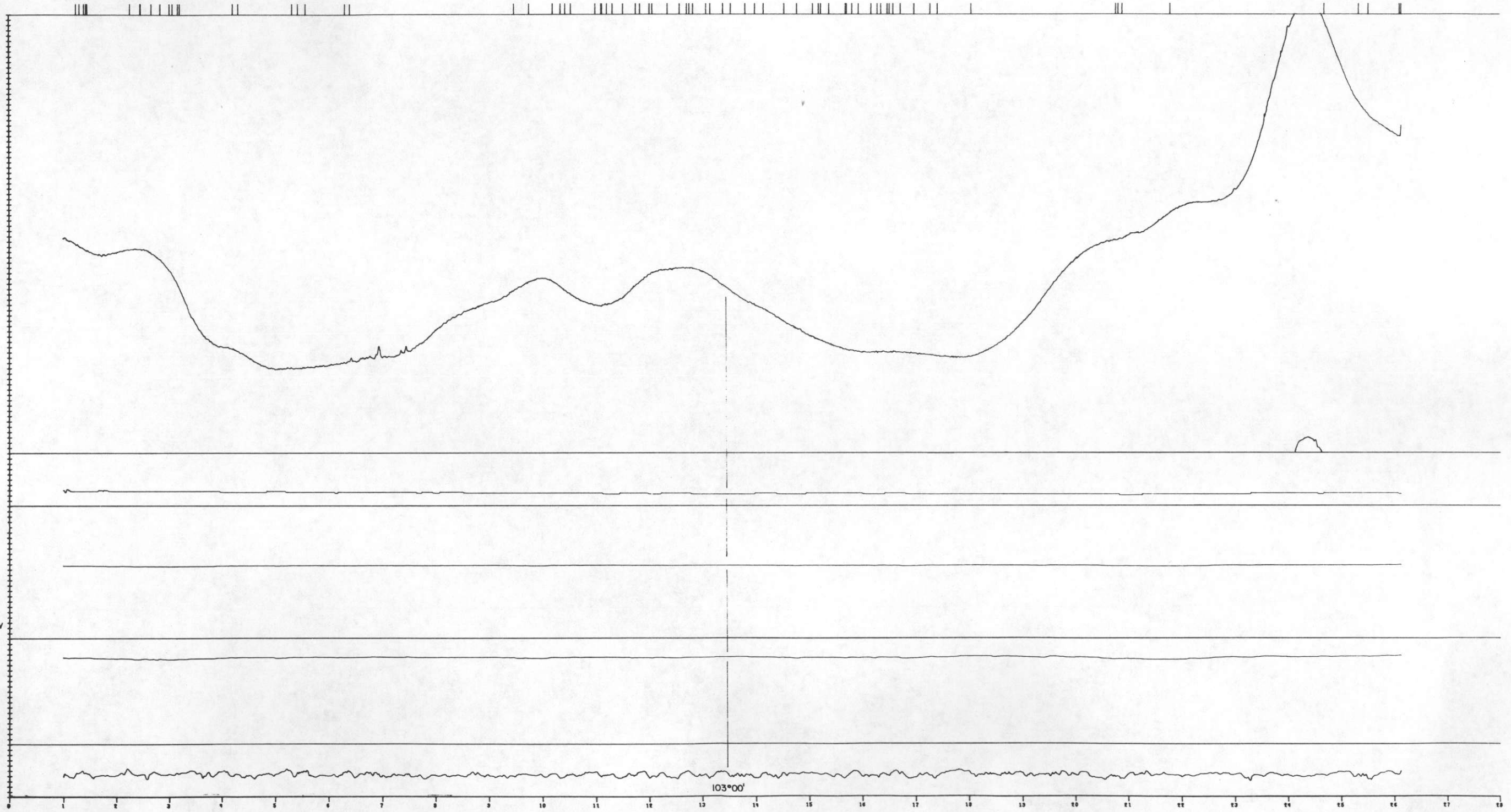
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 10

TEMP  
1 DEG C/DIV  
BASE = 15

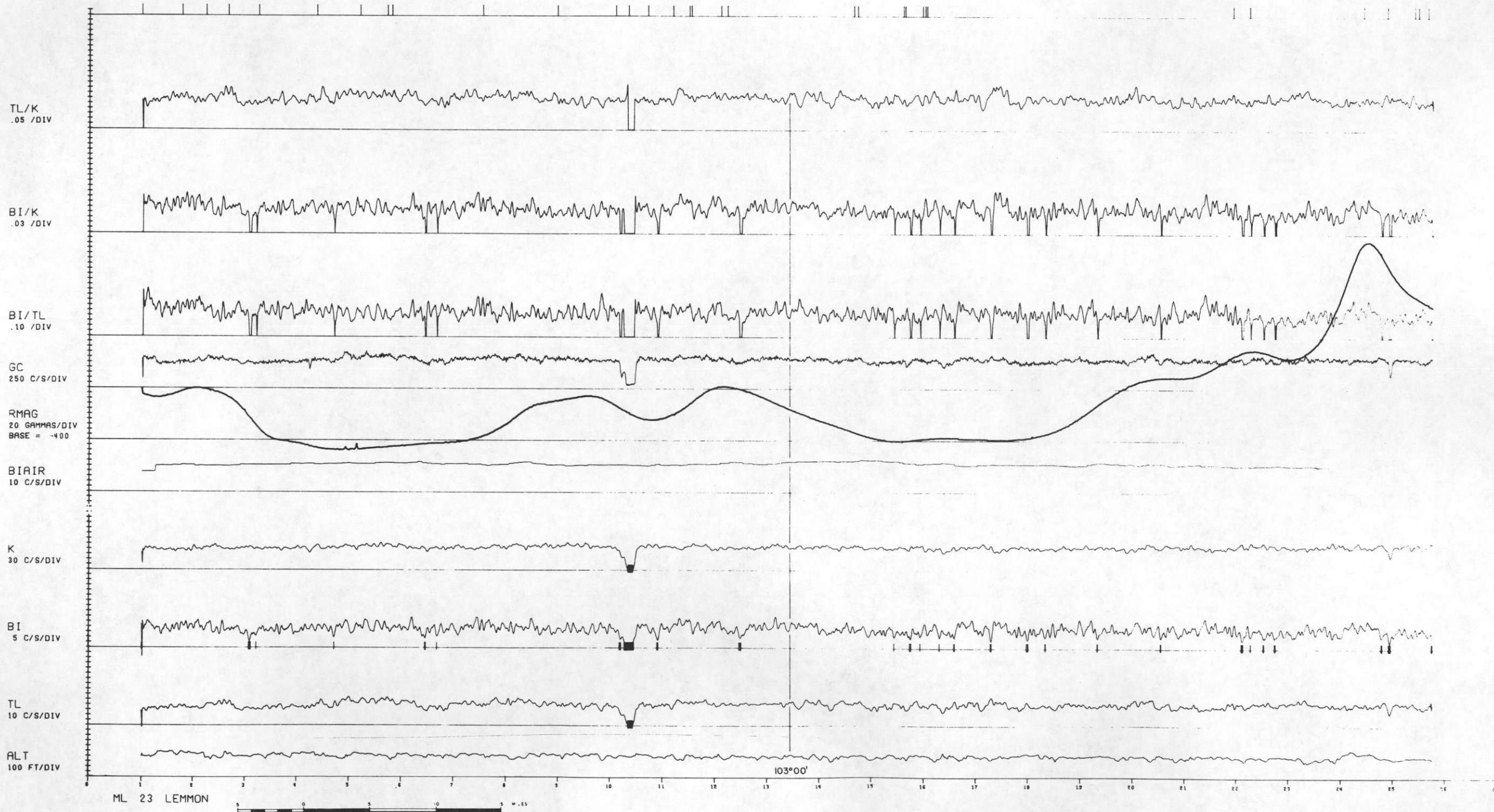
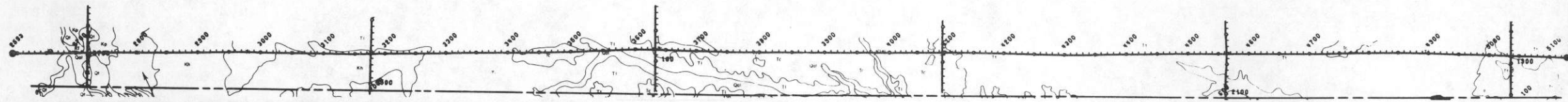
ALT  
100 FT/DIV



103°00'

ML 22 LEMMON

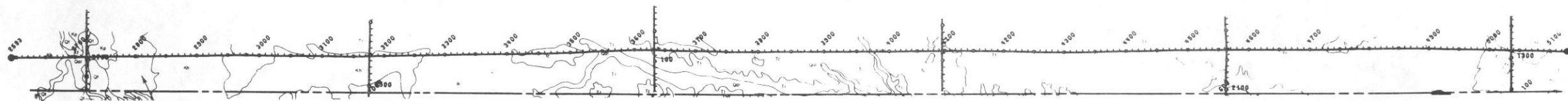




ML 23 LEMMON



103°00'



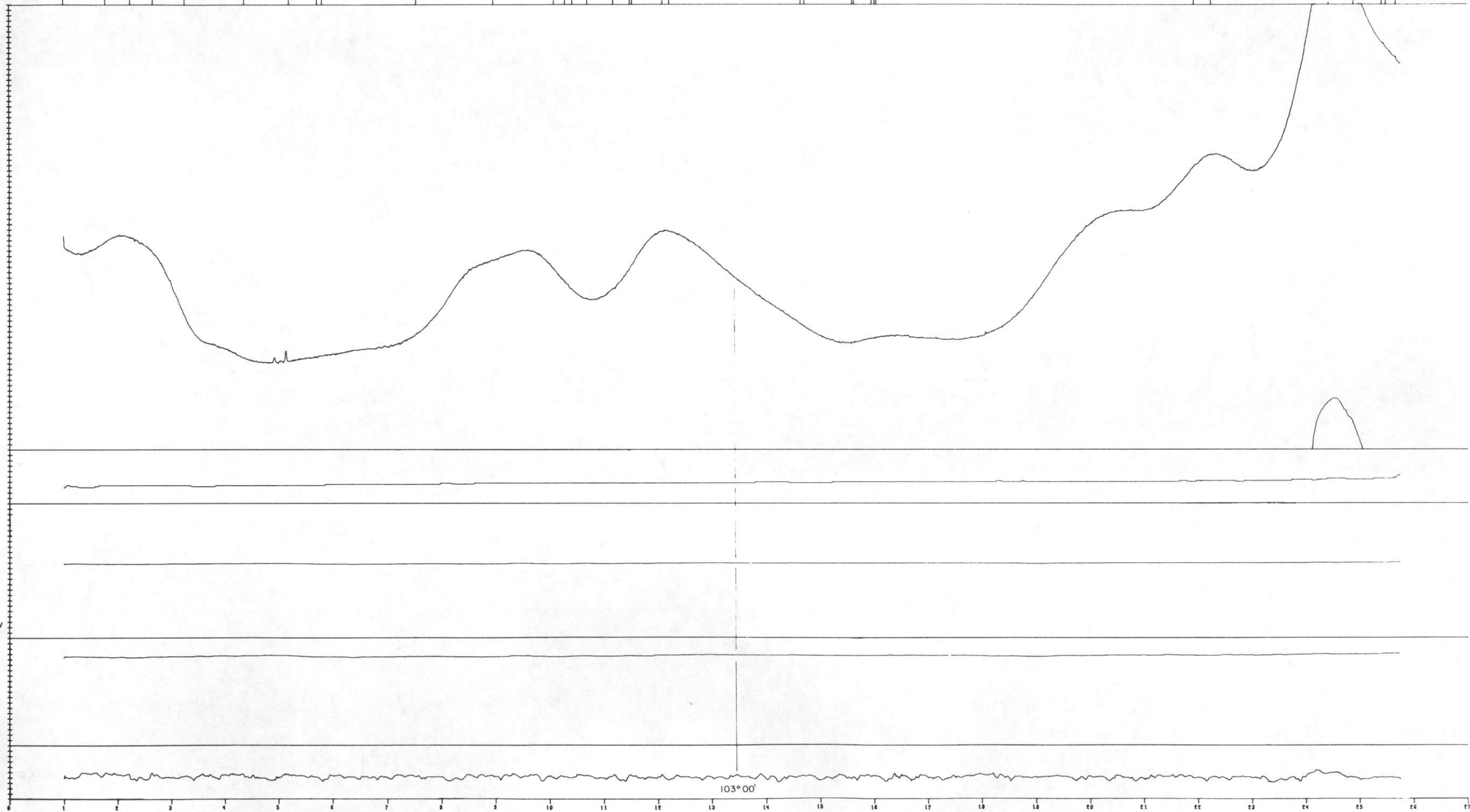
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

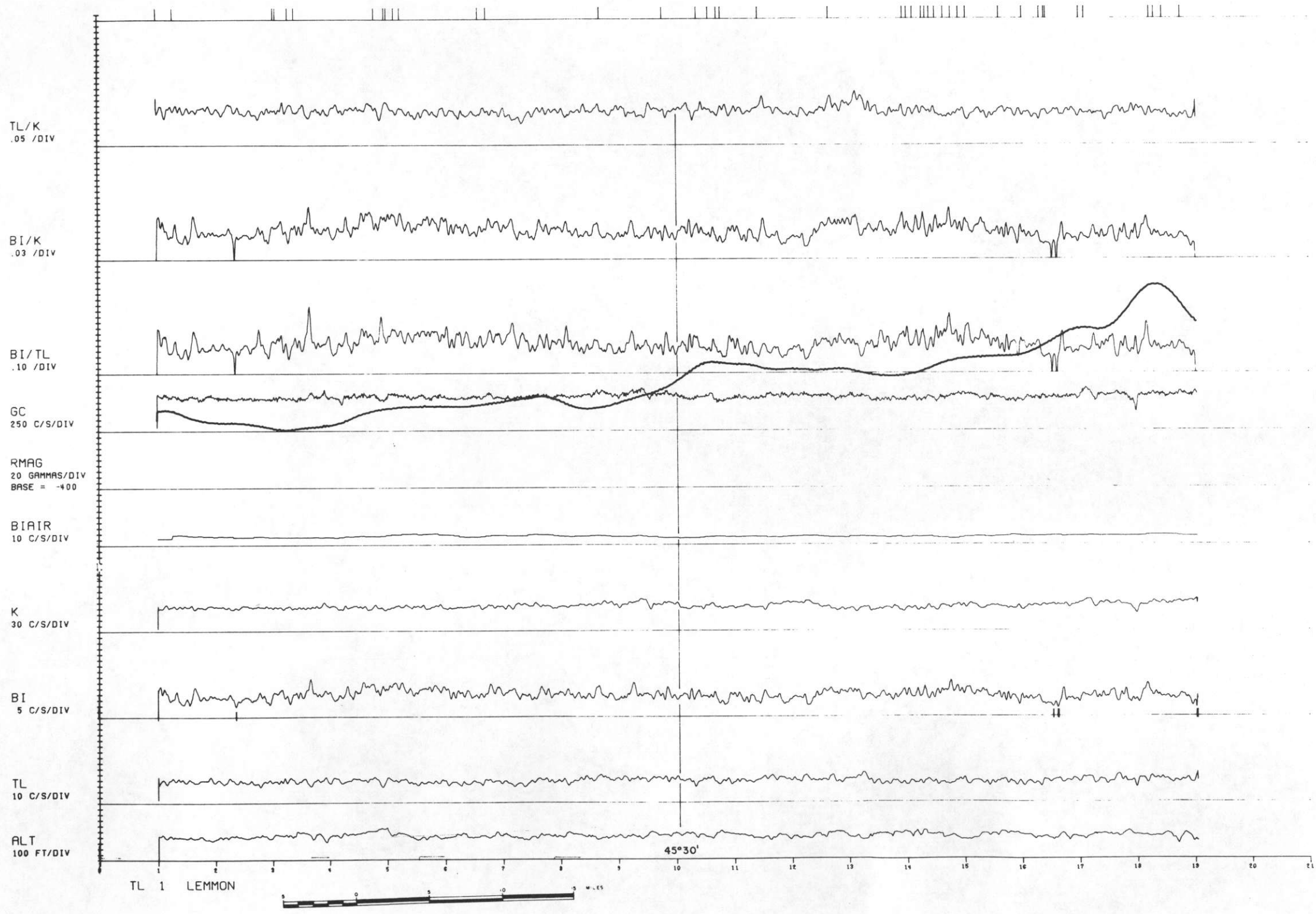
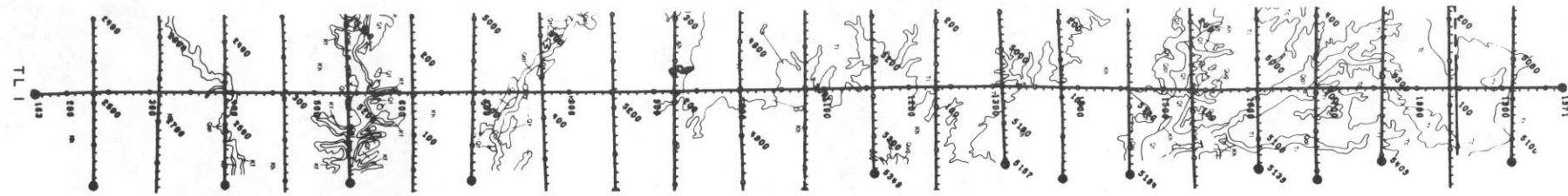
ALT  
100 FT/DIV

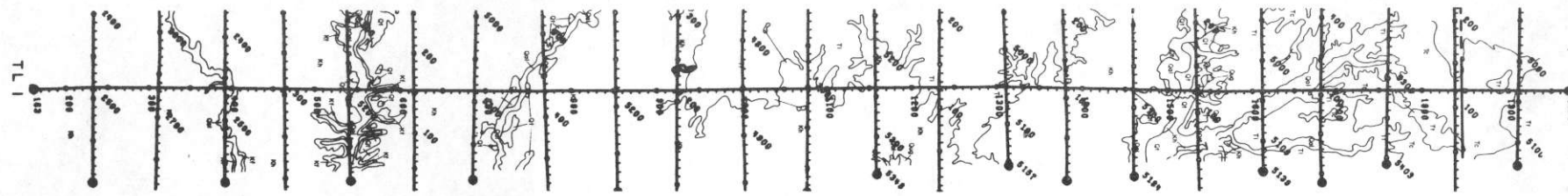


ML 23 LEMMON









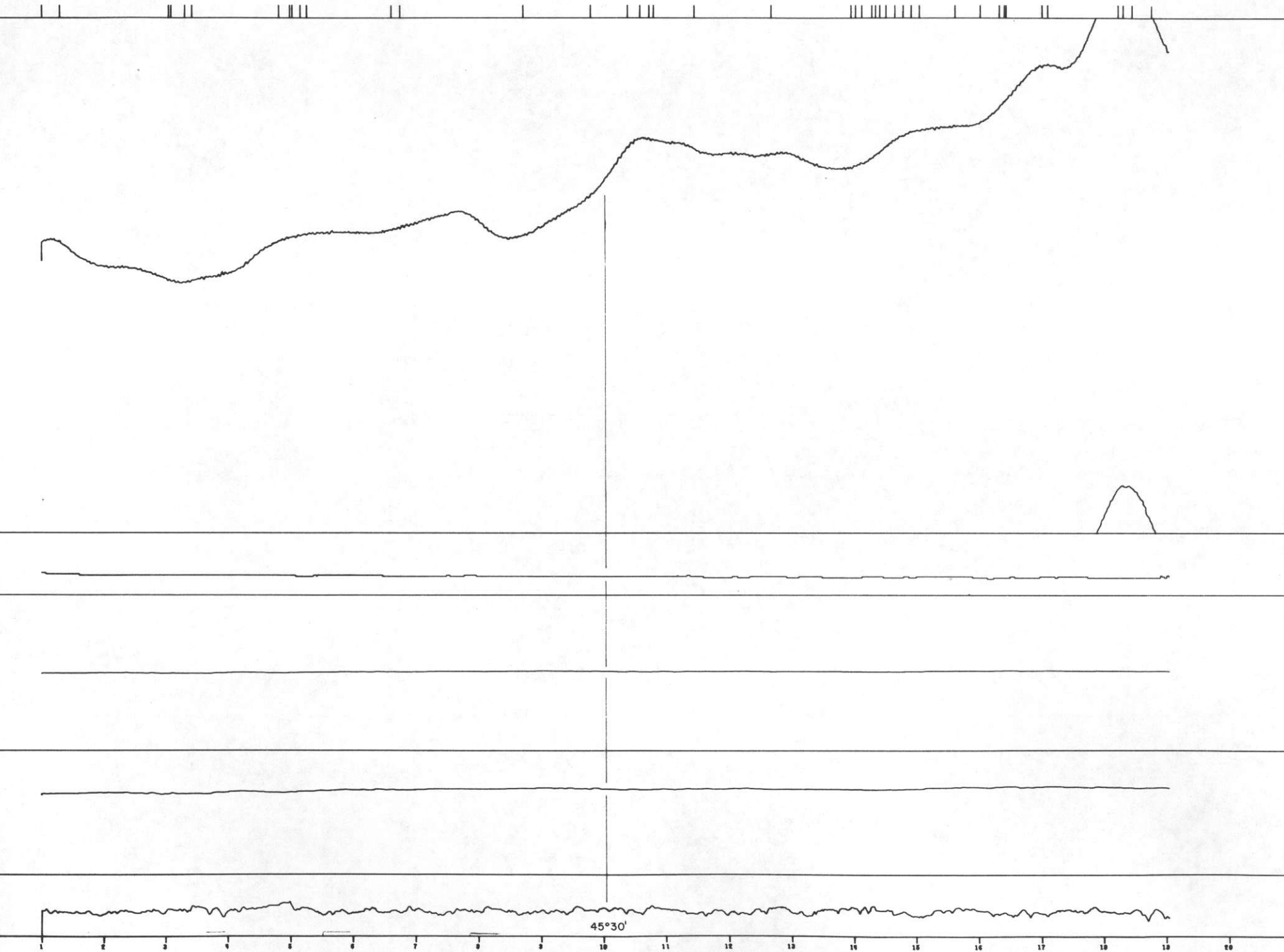
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

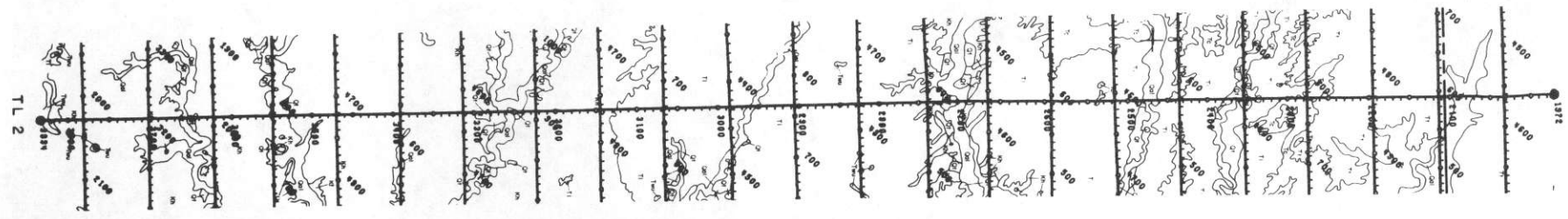
TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



TL 1 LEMMON





TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

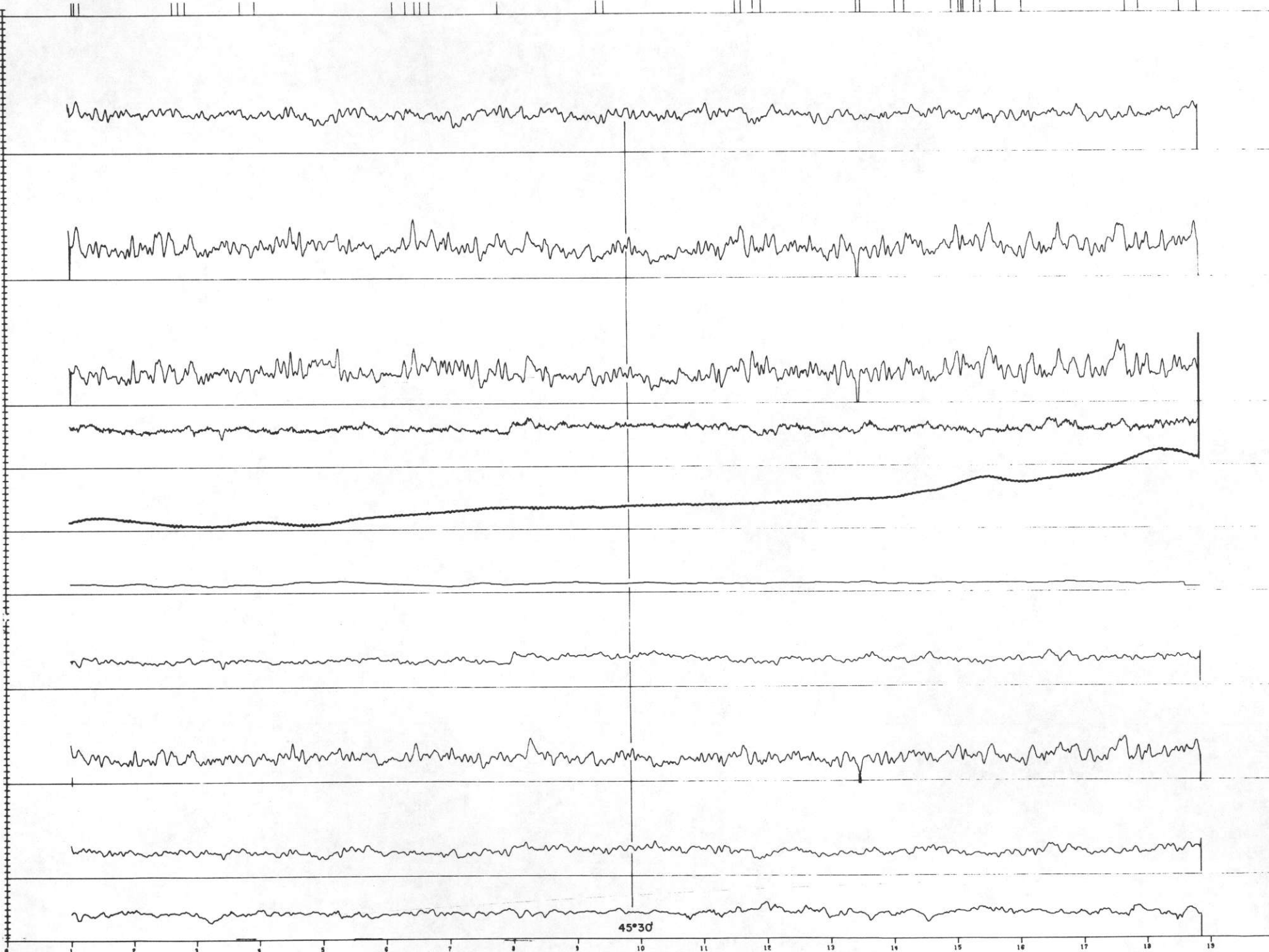
BIAIR  
10 C/S/DIV

K  
30 C/S/DIV

BI  
5 C/S/DIV

TL  
10 C/S/DIV

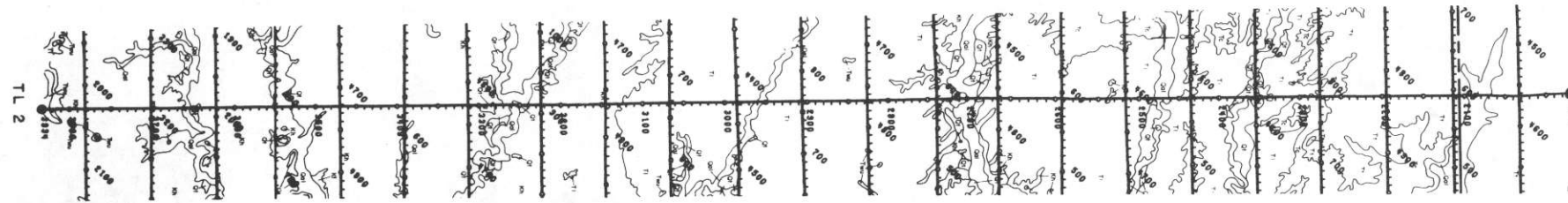
ALT  
100 FT/DIV



TL 2 LEMMON



45°30'



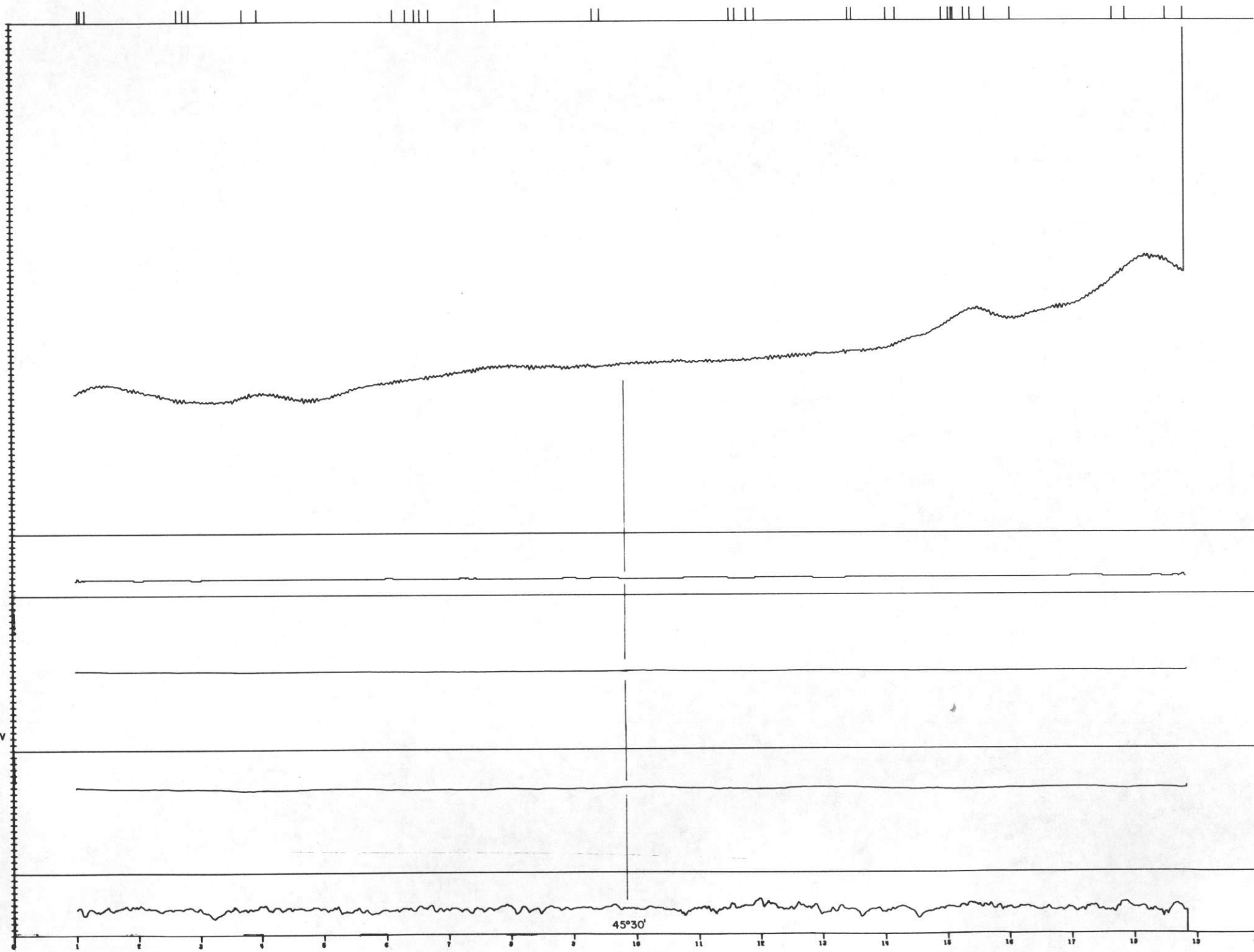
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 10

TEMP  
1 DEG C/DIV  
BASE = 15

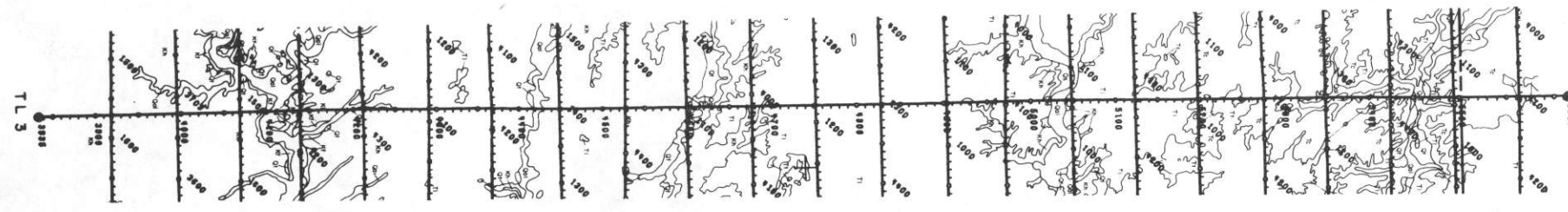
ALT  
100 FT/DIV



TL 2 LEMMON



45°30'



TL/K  
.05 /DIV

BI/K  
.03 /DIV

BI/TL  
.10 /DIV

GC  
250 C/S/DIV

RMAG  
20 GAMMAS/DIV  
BASE = -400

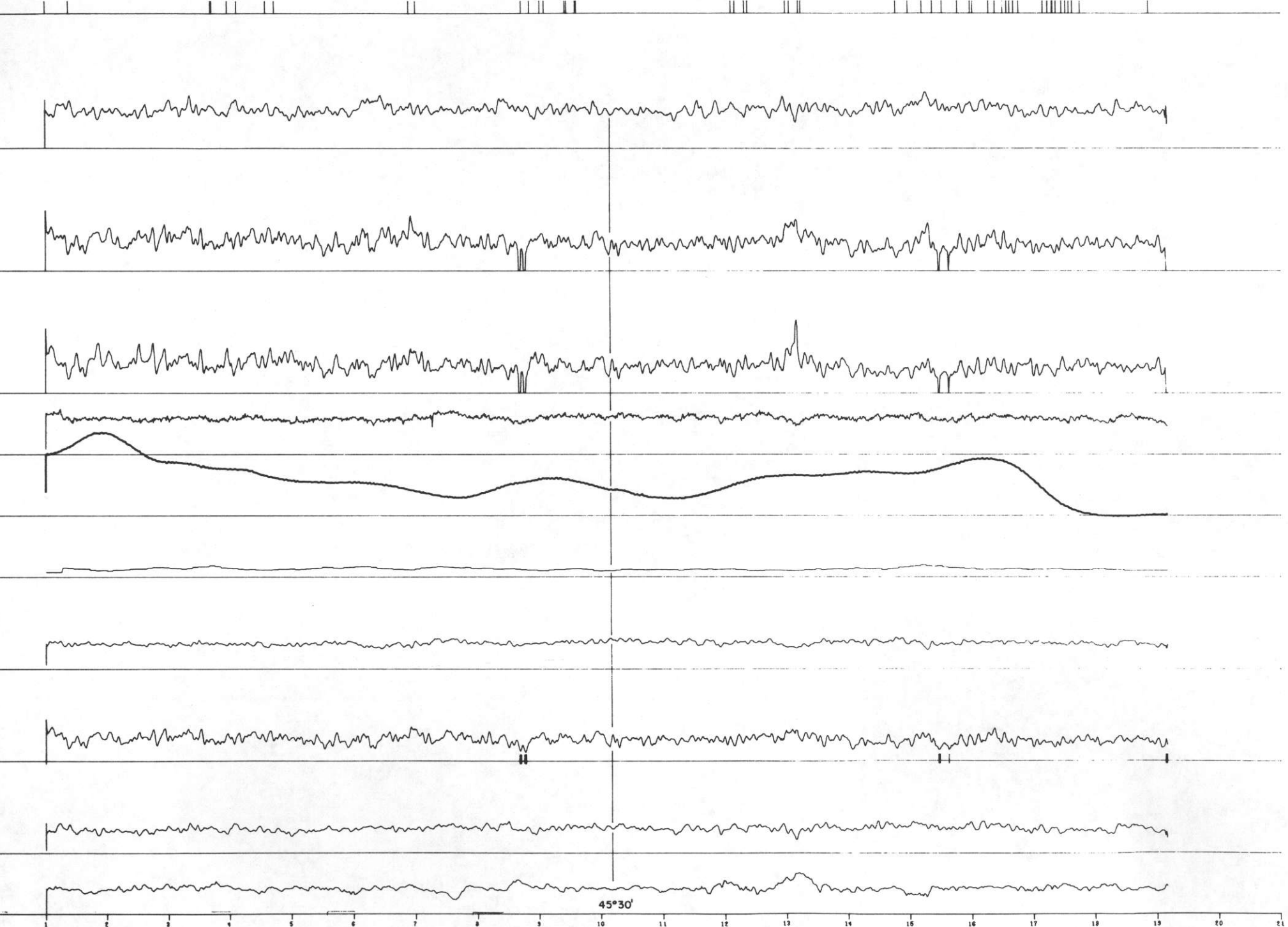
BIAIR  
10 C/S/DIV

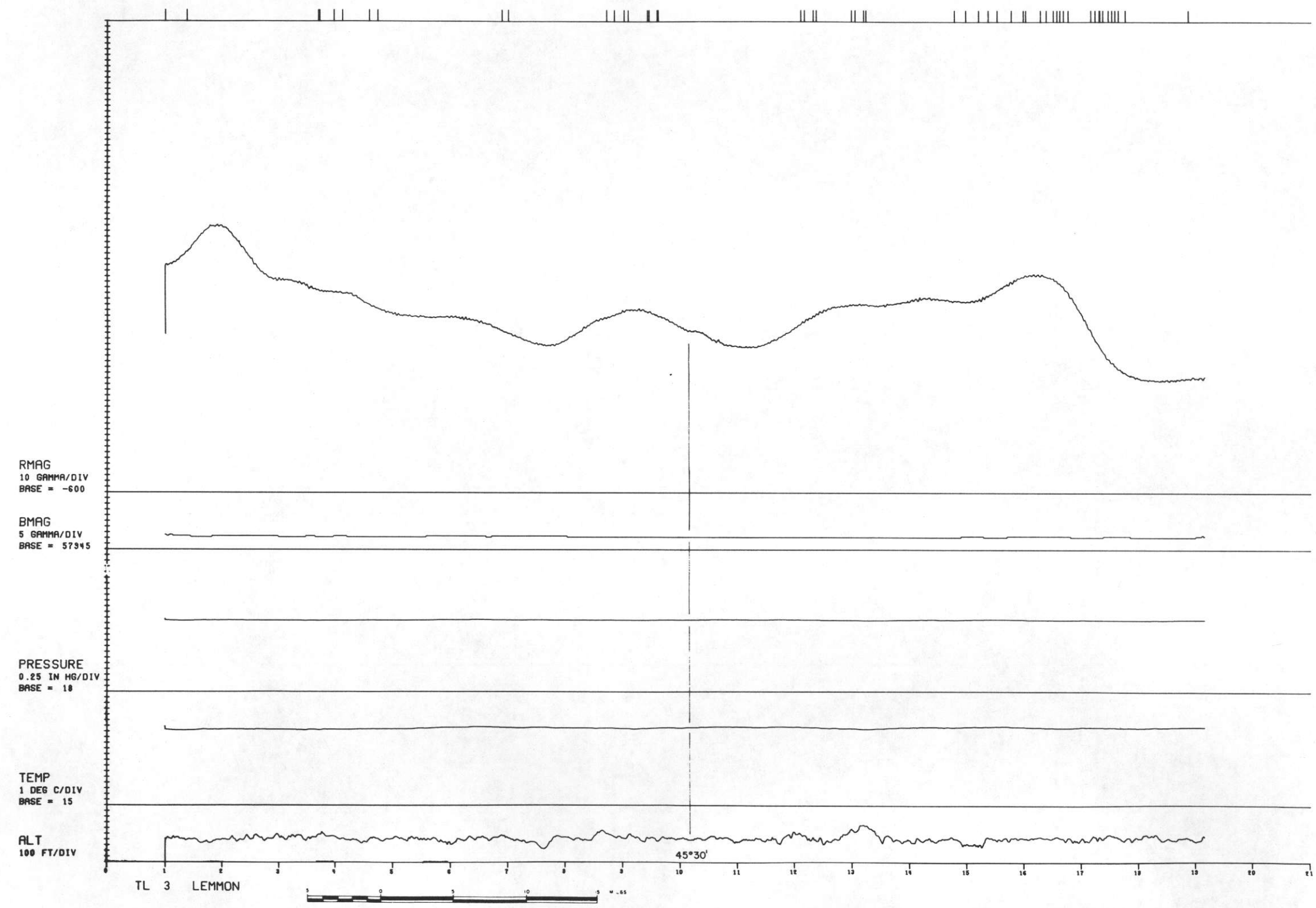
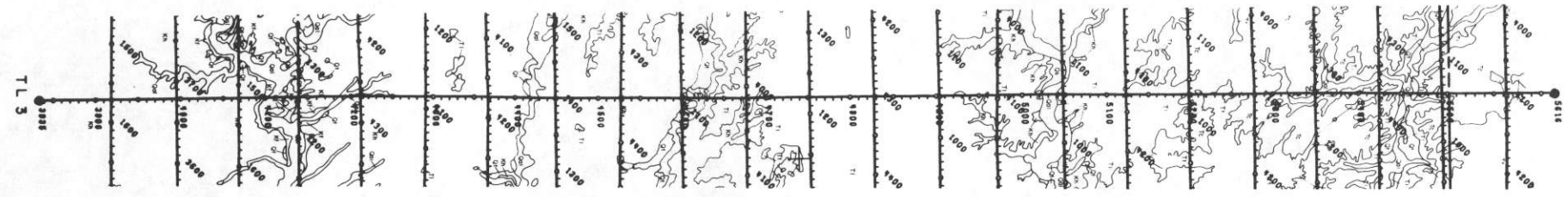
K  
30 C/S/DIV

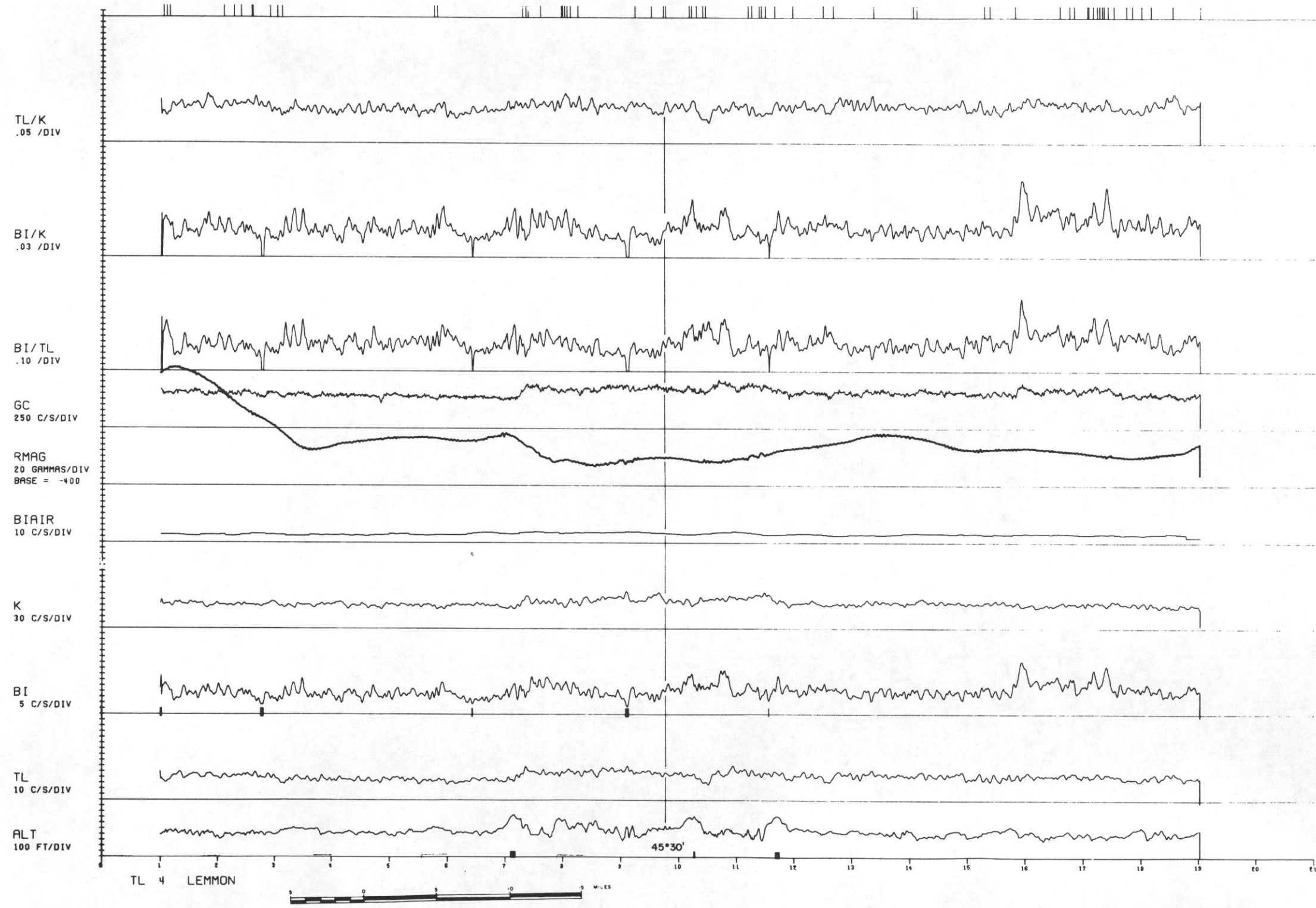
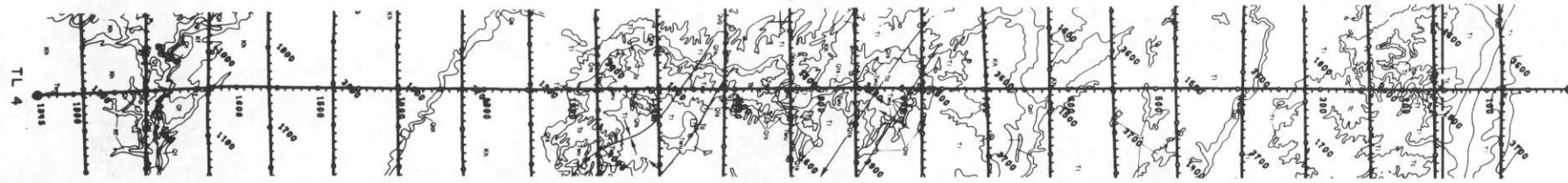
BI  
5 C/S/DIV

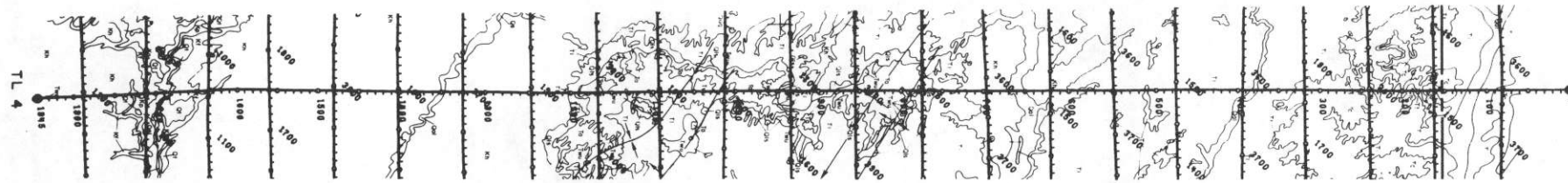
TL  
10 C/S/DIV

ALT  
100 FT/DIV









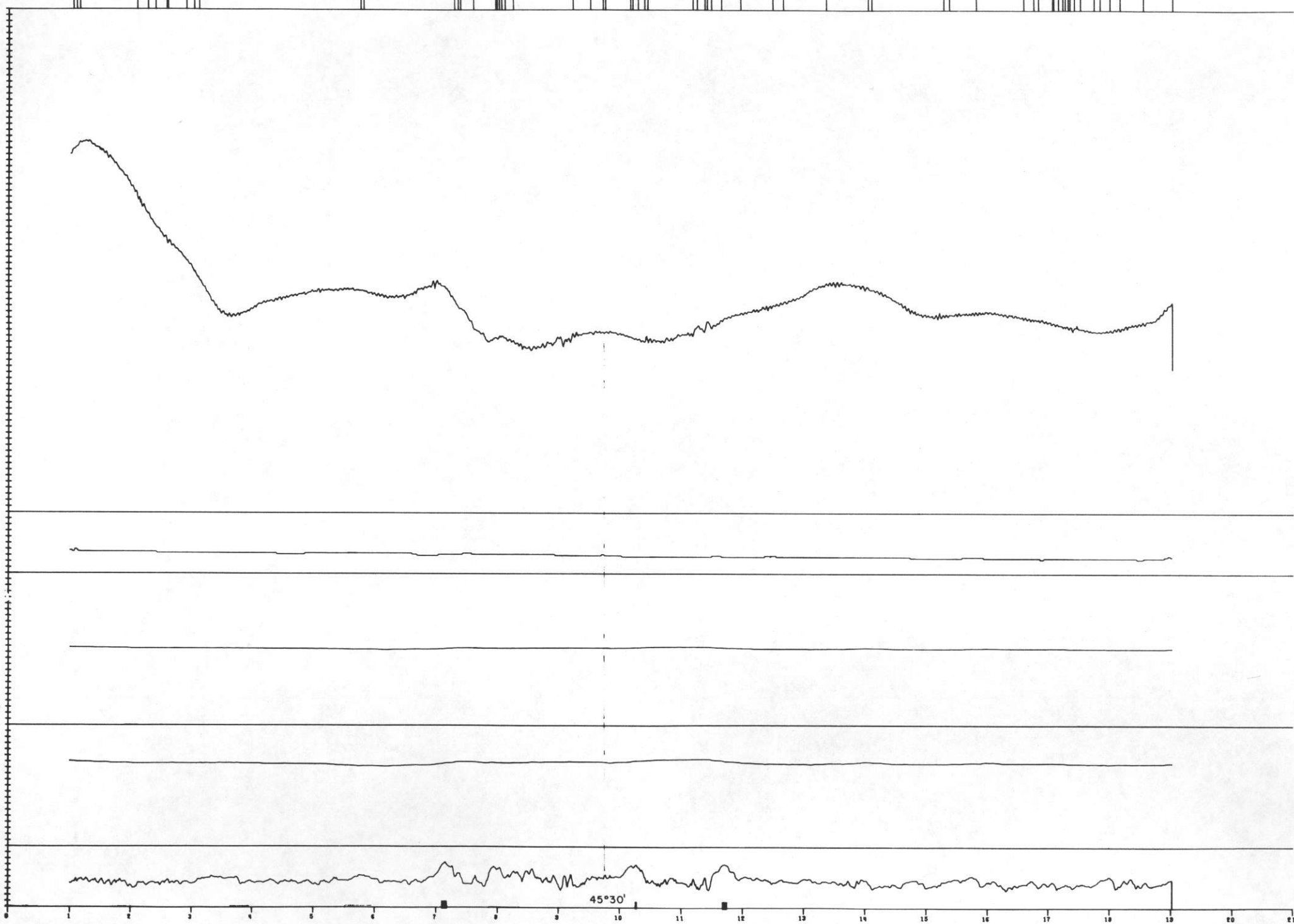
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

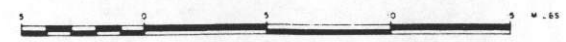
PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

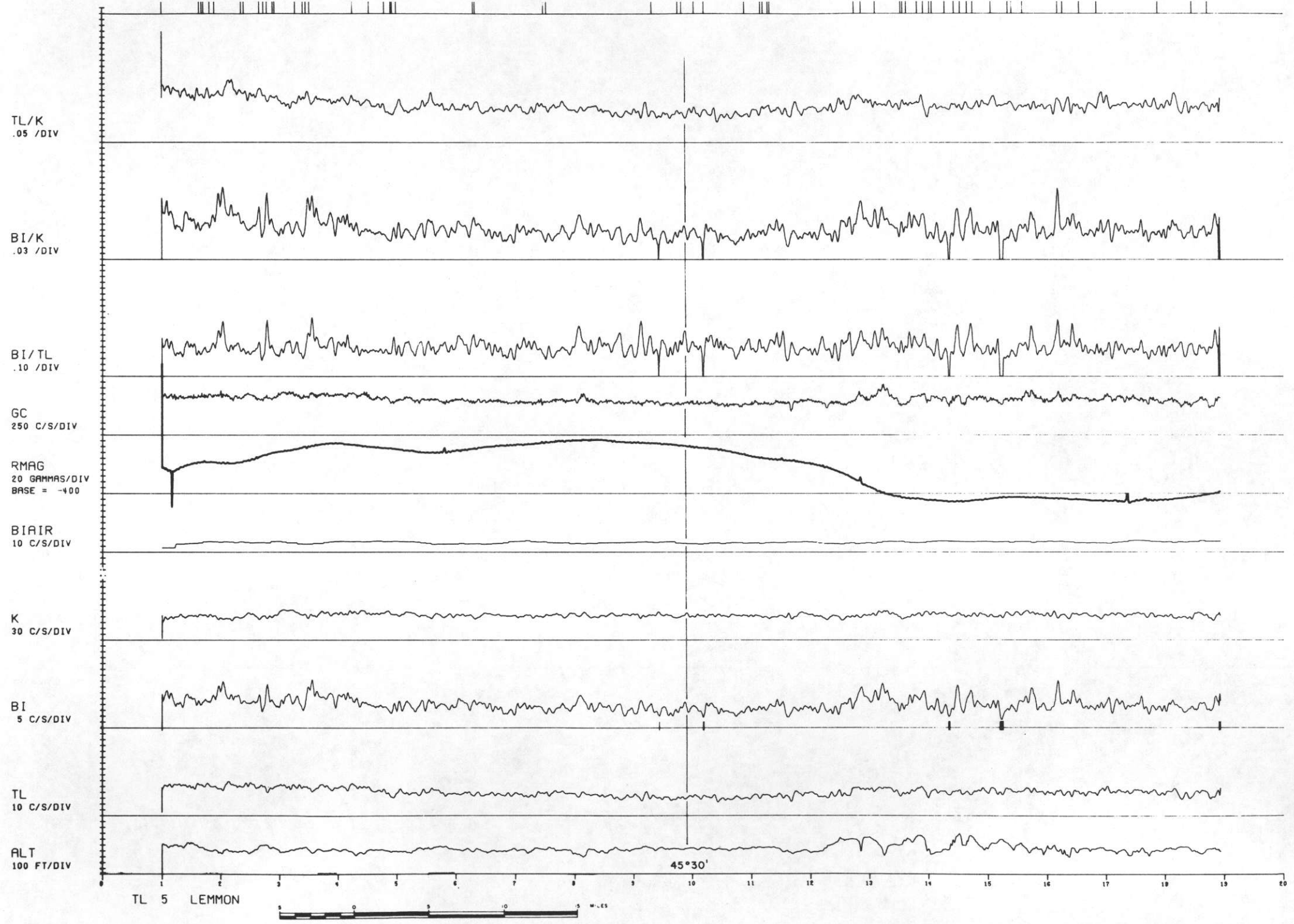
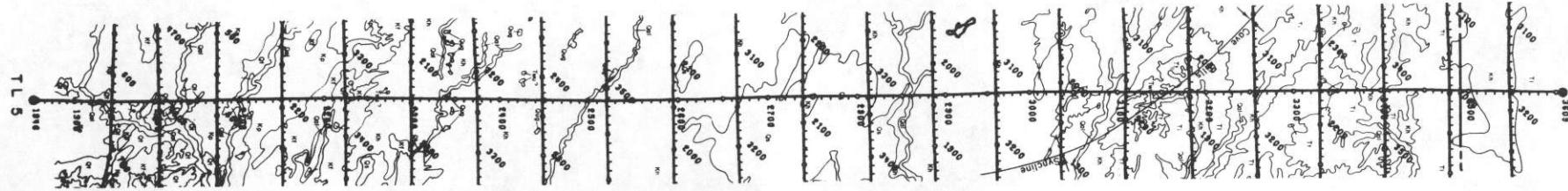
ALT  
100 FT/DIV

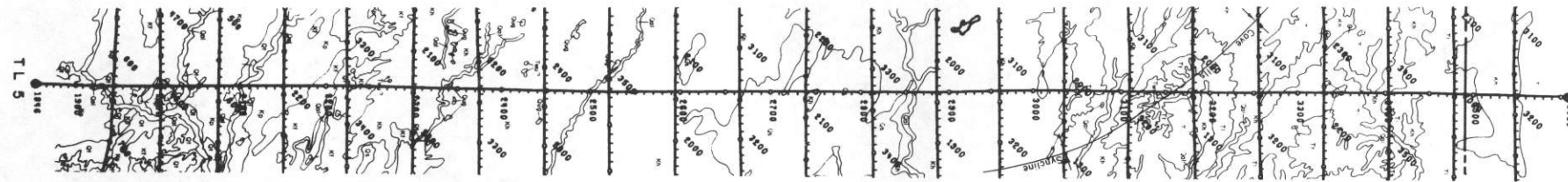


TL 4 LEMMON









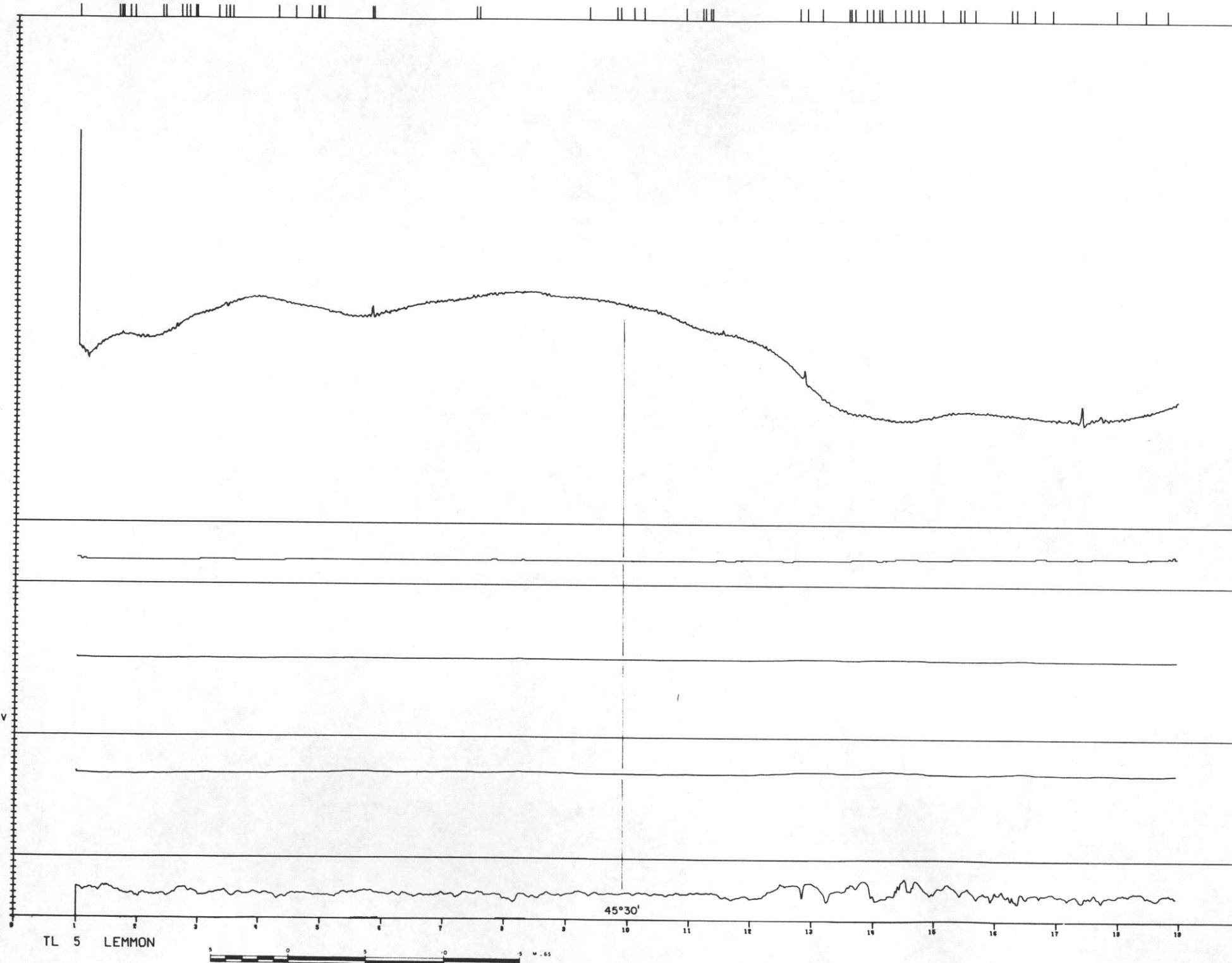
RMAG  
10 GAMMA/DIV  
BASE = -600

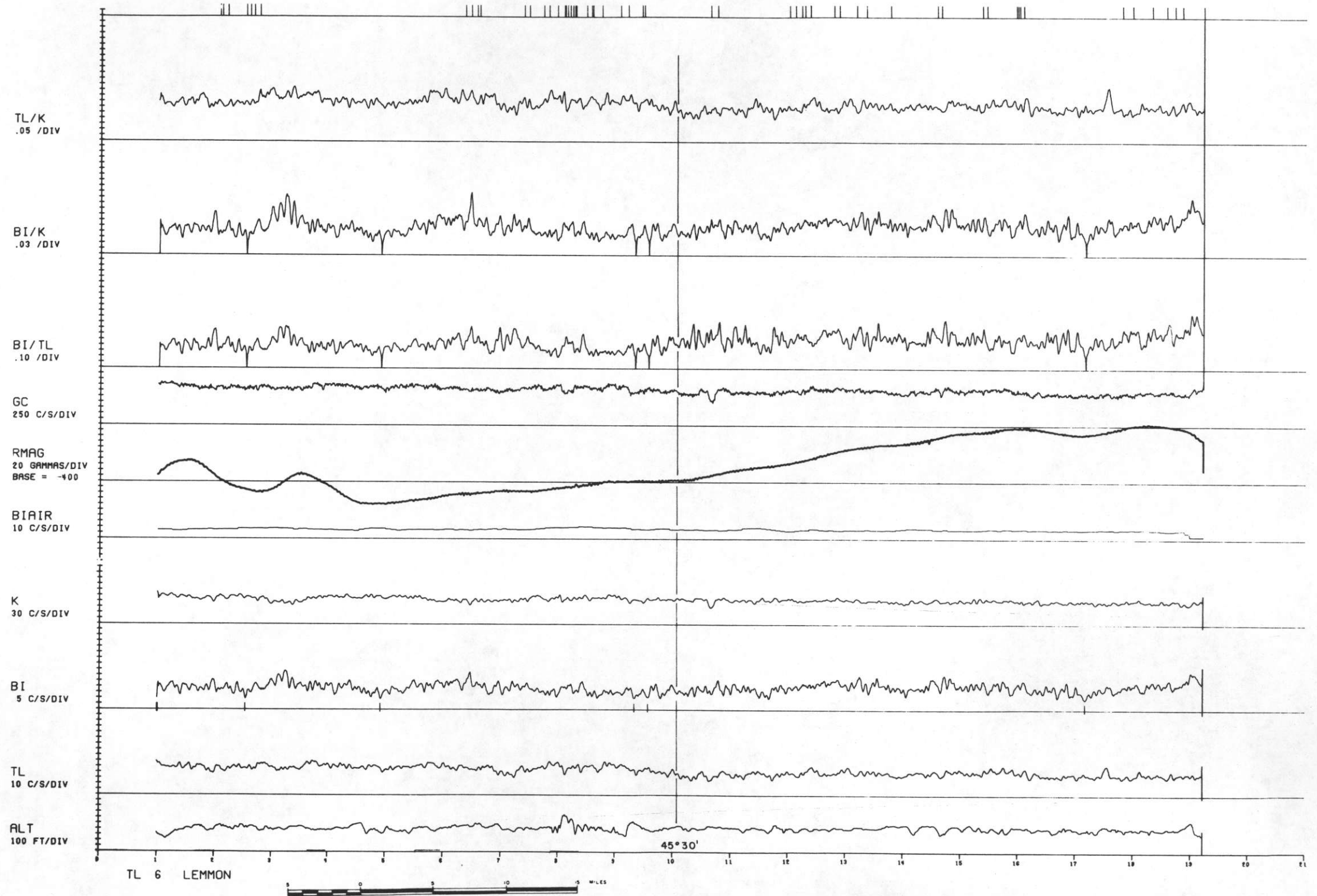
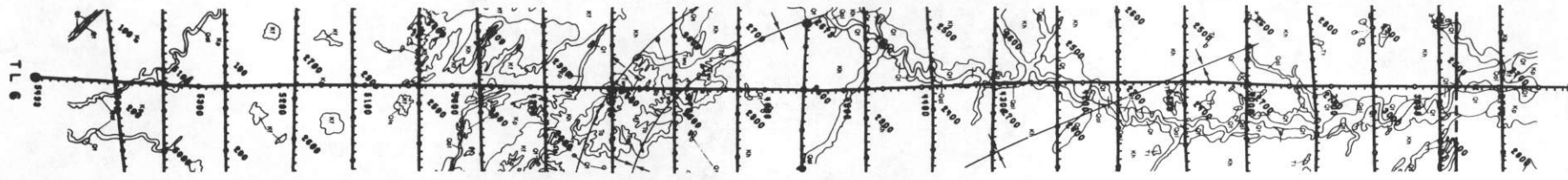
BMAG  
5 GAMMA/DIV  
BASE = 57345

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

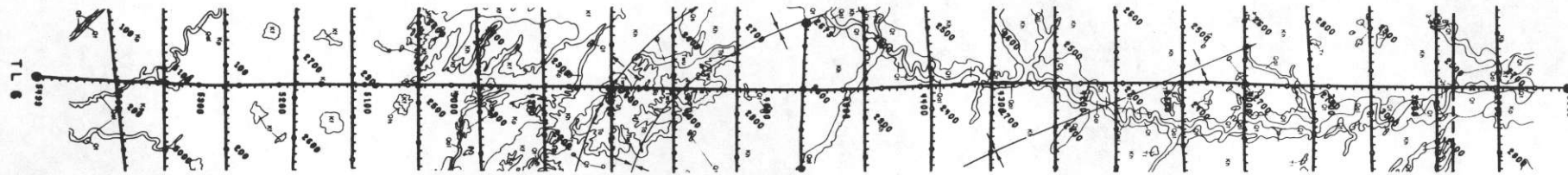
ALT  
100 FT/DIV





TL 6 LEMMON





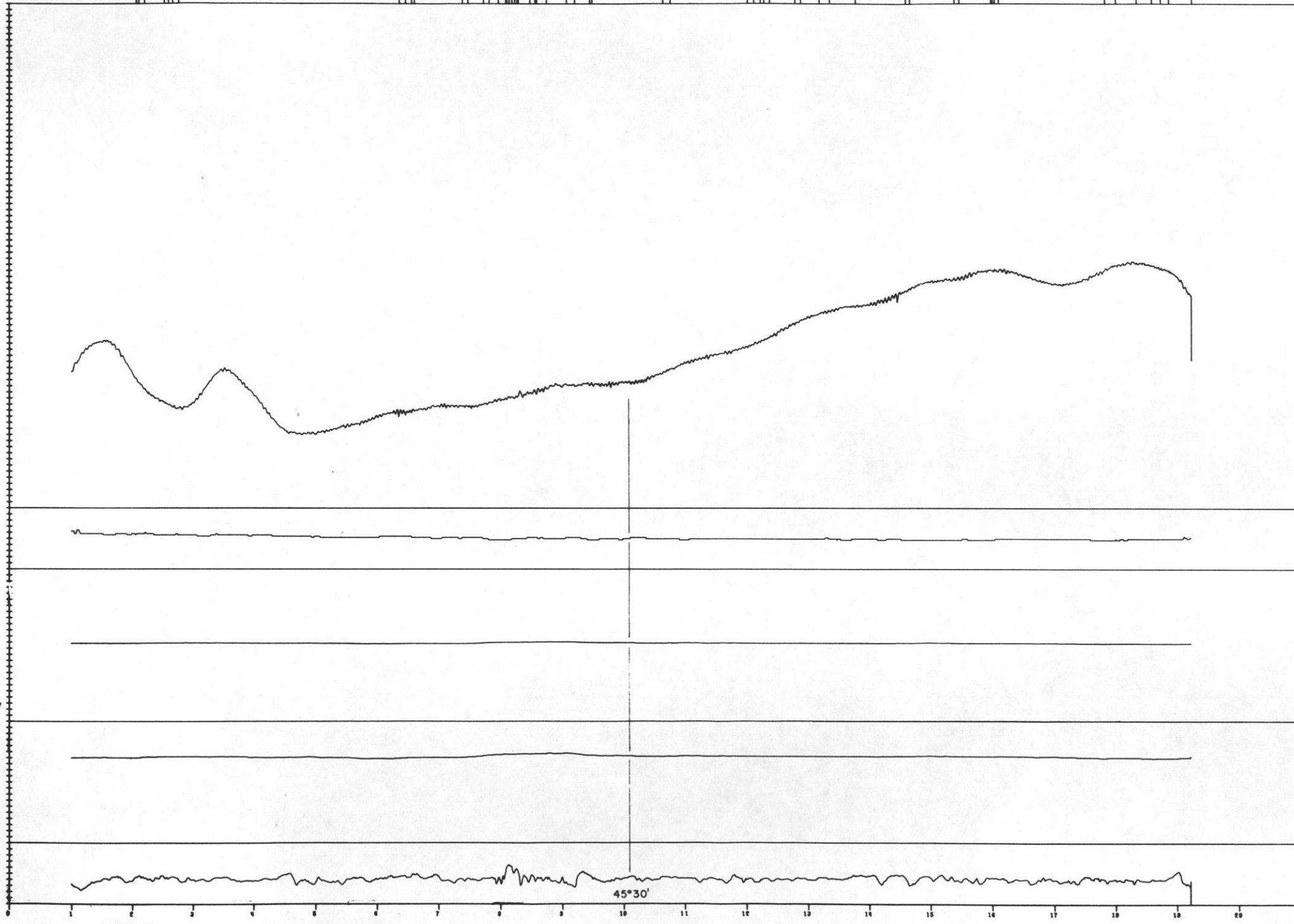
RMAG  
10 GAMMA/DIV  
BASE = -600

BMAG  
5 GAMMA/DIV  
BASE = 57945

PRESSURE  
0.25 IN HG/DIV  
BASE = 18

TEMP  
1 DEG C/DIV  
BASE = 15

ALT  
100 FT/DIV



TL 6 LEMMON





