

AD-A022 877

SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
GULF OF CALIFORNIA, 14 JUNE 1975

K. J. Hill, et al

Teledyne Geotech

Prepared for:

Air Force Technical Applications Center

22 January 1976

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AD A 022877

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Gulf of California, 14 June 1975

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January 1976

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1400 Wilson Boulevard, Arlington, Virginia 22209
ARPA Order No. 2897

Monitored By

VELA Seismological Center
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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER SDCS-ER-75-61	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) SPECIAL DATA COLLECTION SYSTEM (SDCS) Gulf of California, 14 June 1975		5. TYPE OF REPORT & PERIOD COVERED Technical
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Hill, K. J., Dawkins, M. S., Baumstark, R. R., and Gillespie, M. D.		8. CONTRACT OR GRANT NUMBER(s) F08605-74-C-0013
9. PERFORMING ORGANIZATION NAME AND ADDRESS Teleayne Geotech 314 Montgomery Street Alexandria, Virginia 22314		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS T/4703
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia		12. REPORT DATE 22 January 1976
		13. NUMBER OF PAGES 18
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) VELA Seismological Center 312 Montgomery Street Alexandria, Virginia 22314		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		ACCESSION NO. DTIC DD UNANNOUNCED JUSTIFIED BY DISTRIBUTION STATEMENT 100 A

1

SDCS EVENT REPORT NO. 61

→ Gulf of California, 14 June 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event.

→ Published epicenter information from seismic observations is: *given*

	"P" Arrival	Origin Time	Lat.	Long.	m_b	M_s
NORSAR	02:38:23.0	02:26:06	24 N	109 W	5.0	N/A
LASA	02:31:07.5	02:25:52	22.0N	108.2W	5.1	N/A
PDE		02:26:01	23.3N	108.0W	5.1	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

02:25:59.0 23.4N 107.9W 5.1 5.1

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at WH2YK, CPSO, RK-ON, FN-WV, LASA and NORSAR. High background noise prevented determination of signal arrival at HN-ME. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations, ALPA, LASA and NORSAR. Horizontal LP channels at WH2YK, CPSO, RK-ON, and HN-ME were rotated. Signal clipping on the LP radial channel at FN-WV prevented rotation of the horizontal channels. The arrival of the LQ phase at HN-ME appears on the LP radial channel; no explanation can be made for this occurrence and validity is therefore questionable. It is not certain that the ALPA, LASA and NORSAR long-period vertical beam data are valid and the horizontal channels were not included because of program recovery problems.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0 N 134 58 02.0 W	855	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 14 JUN 75
 02:25:52.0 21.998N 108.200W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST		
CPC	02 31 02.5	-0.4	0.1	22.8	52.9
LAC	02 31 07.5	0.9	0.9	23.2	2.9
FN-WV	02 31 55.5	0.5	0.6	28.5	51.4
BK-CN	02 32 02.5	-0.9	-1.5	29.5	18.4
WH2YK	02 33 48.9	-0.4	0.1	41.7	340.3
NAO	02 38 23.0	0.3	-0.2	82.6	25.7

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
02:26:15.2	23.973N	107.619W	108. CAIC	0.7	4	6
02:25:59.0	23.431N	107.864W	0. REST	0.8	3	6

CALC			REST		
1	2		1	2	
0	.	1	0	.	1
0	0.2	0	0	0.2	0
.
0	0.0	0	0	0.0	0
0	.	0	0	.	0
0	0		0	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.31
 MAJOR 98.8KM. MINOR 38.4KM. AZ= 17 AREA= 11910 SQ.KM. REST

95 PERCENT CONFIDENCE ON DEPTH CHISQUARE WITH DISTANCE VARIANCE = ±232.499

DATA SUMMARY

INPUT FOR EVENT 14 JUN 75
 02:25:52.0 21.998N 108.200W OKM.

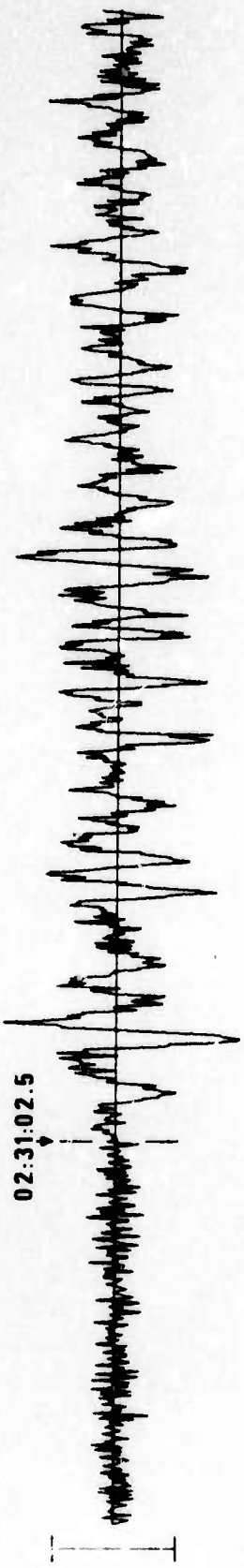
STA.	PHASE	ARRIVAL		INST	FER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
CFC	EP	02 31	02.5	SPZ	1.4	377.	5.56			22.8
CPC	LQ	02 39	10.0	LPT	21.0	427.				
CPC	LR	02 40	35.0	LPZ	21.0	183.		4.74		22.8
LAC	EP	02 31	07.5	AE	1.0	58.	4.76			23.2
LAC	LR	02 40	38.0	LPZ	18.0	421.		5.11		23.2
FN-WV	EP	02 31	55.5	SPZ	1.4	37.	4.87			28.5
FN-WV	LQ	02 41	58.0	IPR	19.0	9999.				
FN-WV	LR	02 44	20.0	LPZ	17.0	677.		5.40		28.5
RK-ON	EP	02 32	02.5	SPZ	1.4	44.	4.94			29.5
RK-CN	LQ	02 42	20.0	LPT	20.0	1587.				
RK-ON	LR	02 44	30.0	LPZ	17.0	619.		5.38		29.5
HN-ME	LQ	02 47	23.0	LPR	21.0	577.				
HN-ME	LR	02 50	24.0	LPZ	17.0	747.		5.59		39.3
WH2YKM	EP	02 33	48.9	SPZ	0.9	8.	4.10			41.7
WH2YK	LQ	02 49	06.0	LPT	20.0	604.				
WH2YK	LR	02 51	01.0	LPZ	21.0	9999.		0.0		41.7
ALFA	LR	02 54	04.0	LPZ	21.0	60.		4.59		49.0
NAC	EP	02 38	23.0	AE	1.5	55.	5.40			82.6
NAC	LR	03 13	55.0	LPZ	20.0	90.		4.99		82.6

ORIGIN	LAT.	LCNG.	DEPTH (KM)	MAG	SDV	STA	IPMAG	LPSDV	LPSTA
02:26:15.2	23.973N	107.619W	108. CAIC	4.77	0.41	6	5.11	0.4	7
02:25:59.0	23.431N	107.864W	0. REST	5.11	0.35	5	5.11	0.4	7

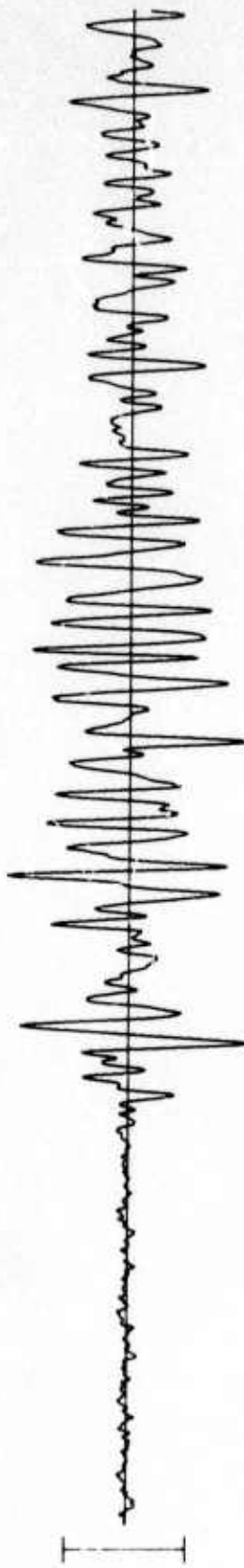
WH2YK NOT USED IN REST RUN SP AVG. MAG.

WH2YK NOT USED IN RESTRAINED RUN SP AVERAGE MAGNITUDE
 CALCULATION BECAUSE ITS MAGNITUDE EXCEEDED THE SDV
 PARAMETERS OF THE HYPOCENTER PROGRAM.

CPSO 14 JUN 75



SPZ
139.44 Mμ



SPR
37.00 Mμ

σ

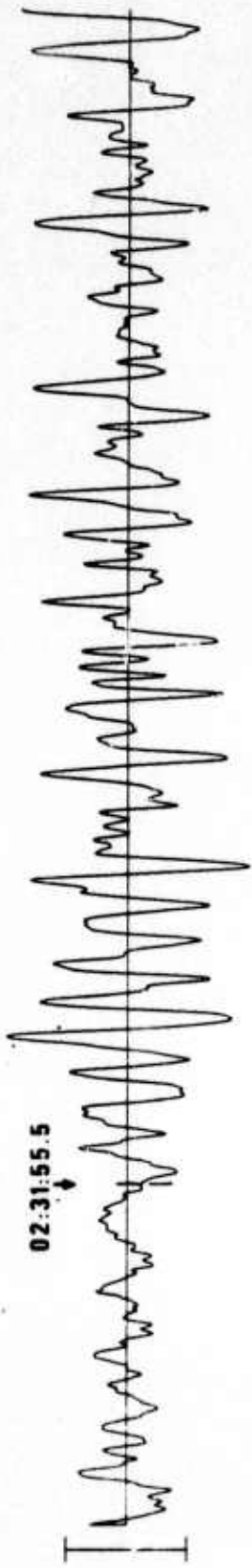


SPT
24.38 Mμ



TIME

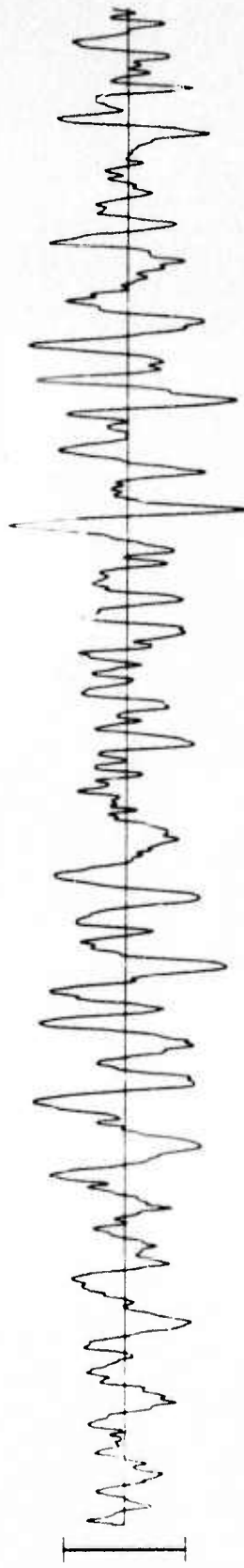
FN-WV 14 JUN 75



SPZ
13.86 M μ



SPR
9.35 M μ



SPT
9.36 M μ

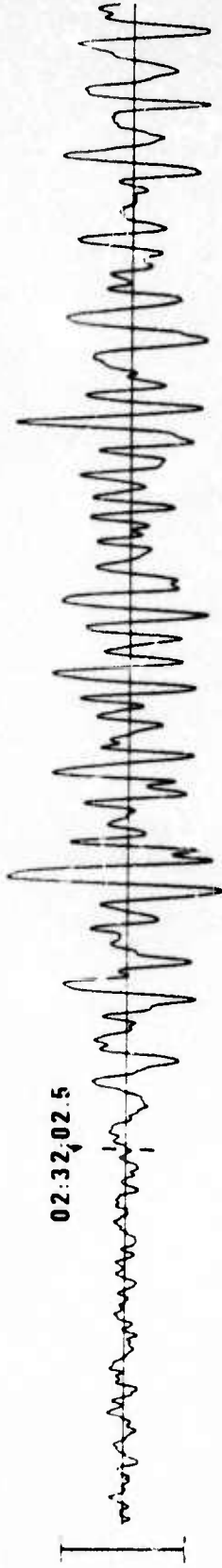
10 SEC

A horizontal scale bar with vertical end caps, indicating a duration of 10 seconds.

RK-ON 14 JUN 75

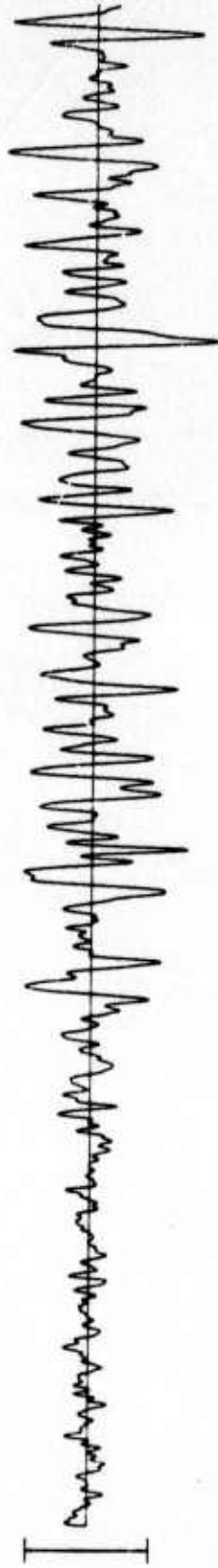
SPZ
22.44 M μ

02:32:02.5



SPR
14.19 M μ

∞



SPT
6.69 M μ



TIME



10 SEC

02:32:30

WH2YK 14 JUN 75

02:33:48.9

SPZ
5.43 M μ



SPR
5.09 M μ

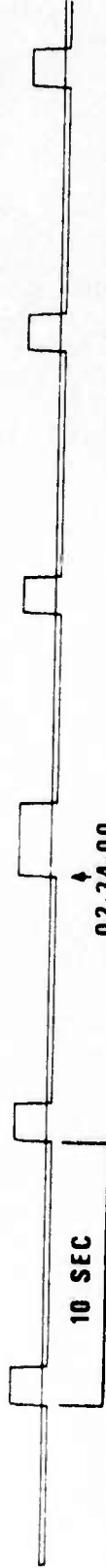


6

SPT
7.08 M μ



TIME



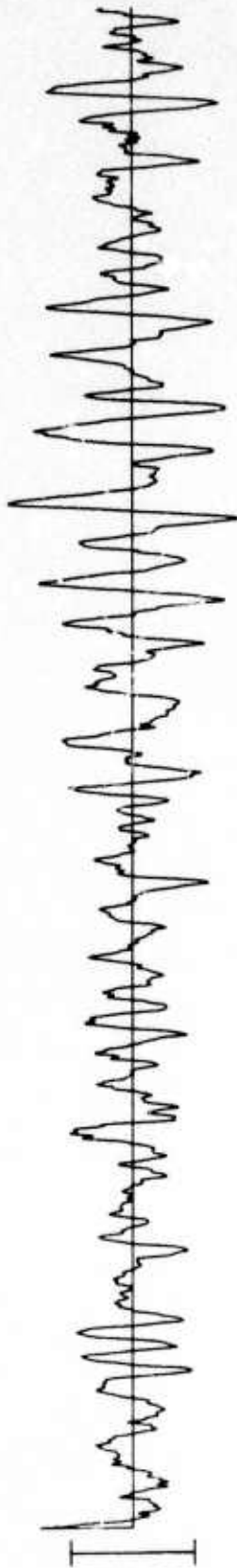
02:34:00

HN-ME 14 JUN 75

SPZ
26.46 Mμ

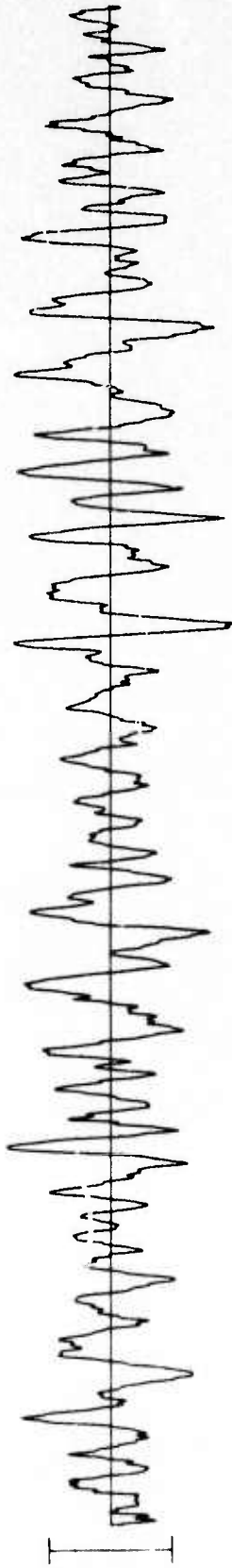


SPR
14.97 Mμ



10

SPT
13.12 Mμ



TIME



10 SEC

02:33:30

LASA

1 14 JUN 1975

2 2 25 52 22.0N 108.2W 33C C 5.1 51 OFF COAST OF CENT. MEXICO

3 2 31 7.6 LAO P 74.3 1.2 11.8 24.6 184.4

ERX 50335

BP-B 0.6-2.0 HZ

ABN 10

2:30:57.6

AB 130

EAB 110

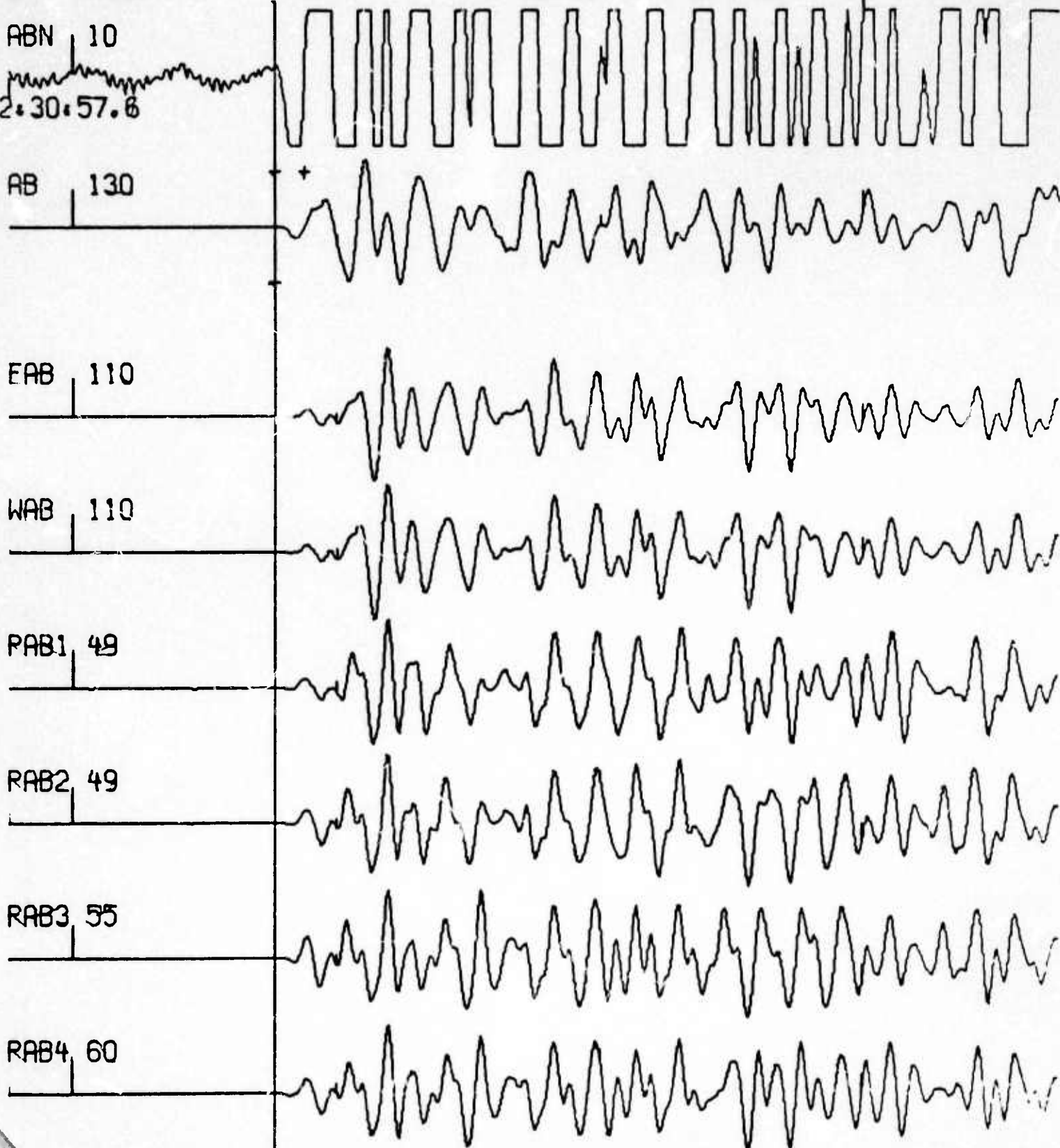
WAB 110

PAB1 49

RAB2 49

RAB3 55

RAB4 60



10 SEC

11

NORSAR EVENT FILE

1975 JUN 14

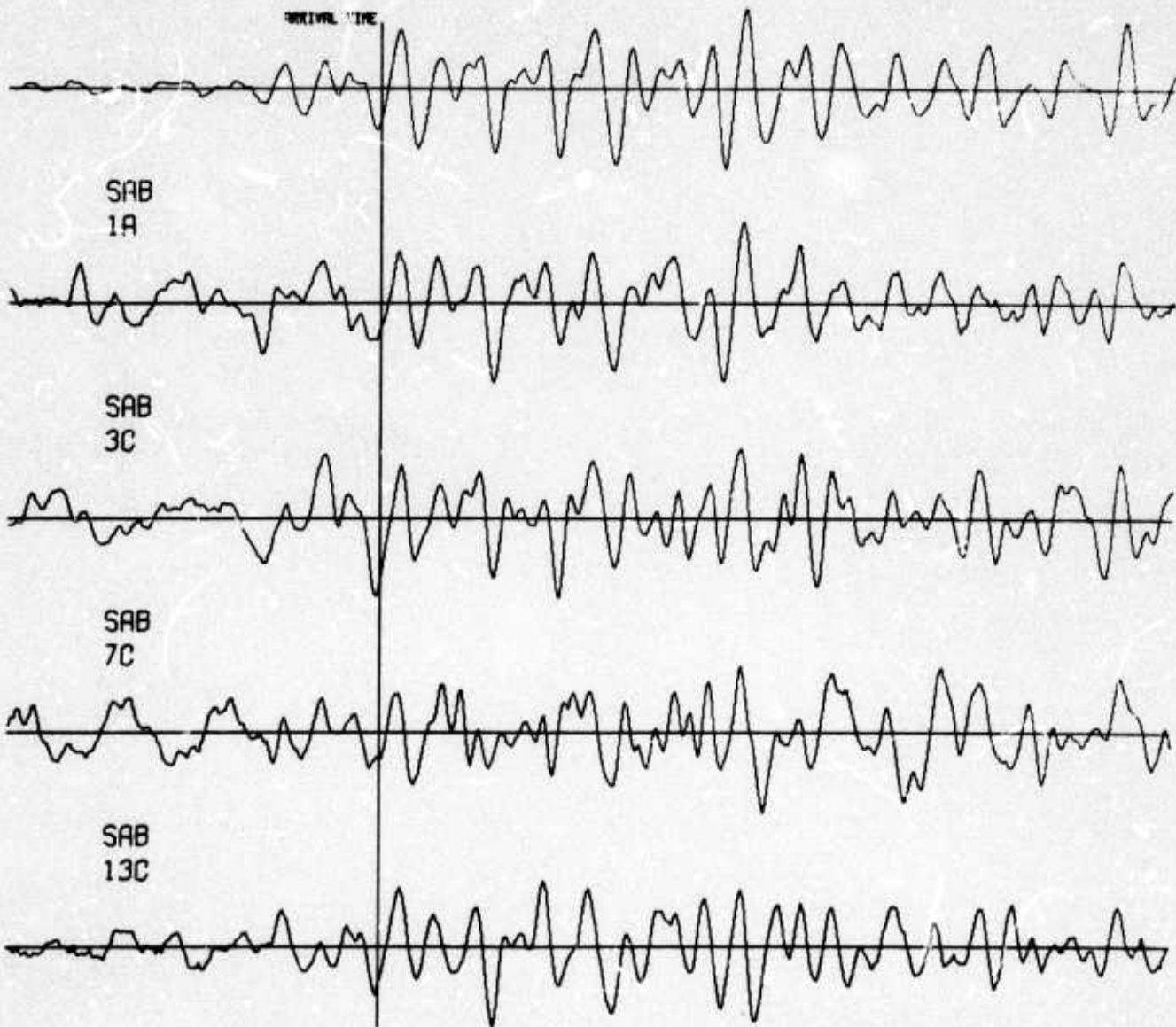
EPX NO. 36490 ARR. 2.38.28.0 24.3N 108.5W 4.6MB 33KM

DIST = 82.1 AZI = 306.6 AMP = 9.9 PER = 1.5

—|—| = 5 SECONDS

AB

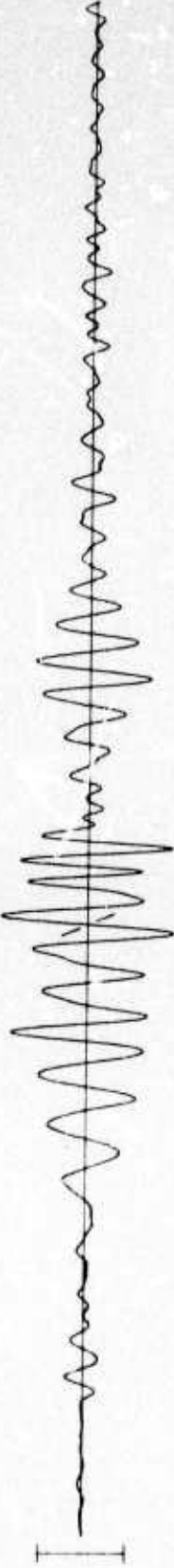
ARRIVAL TIME



CPSO 14 JUN 75

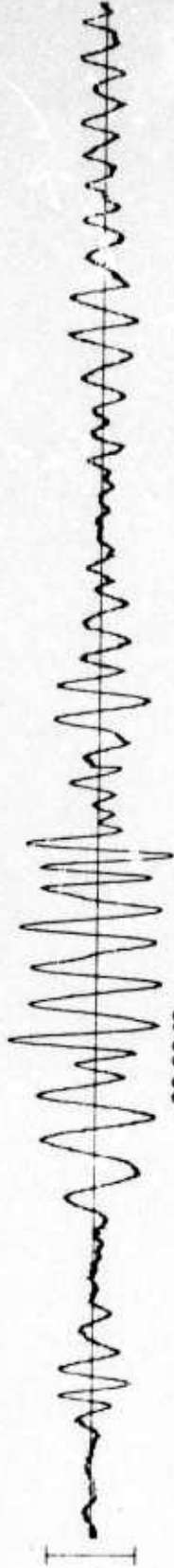
LPZ
1940.24 MHz

02:40:35

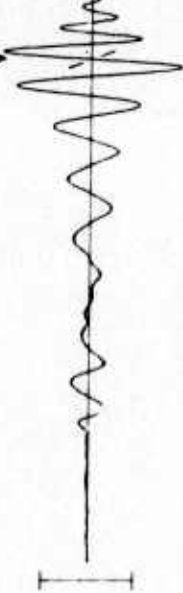


LPR
1423.50 MHz

02:39:10



LPT
4663.48 MHz

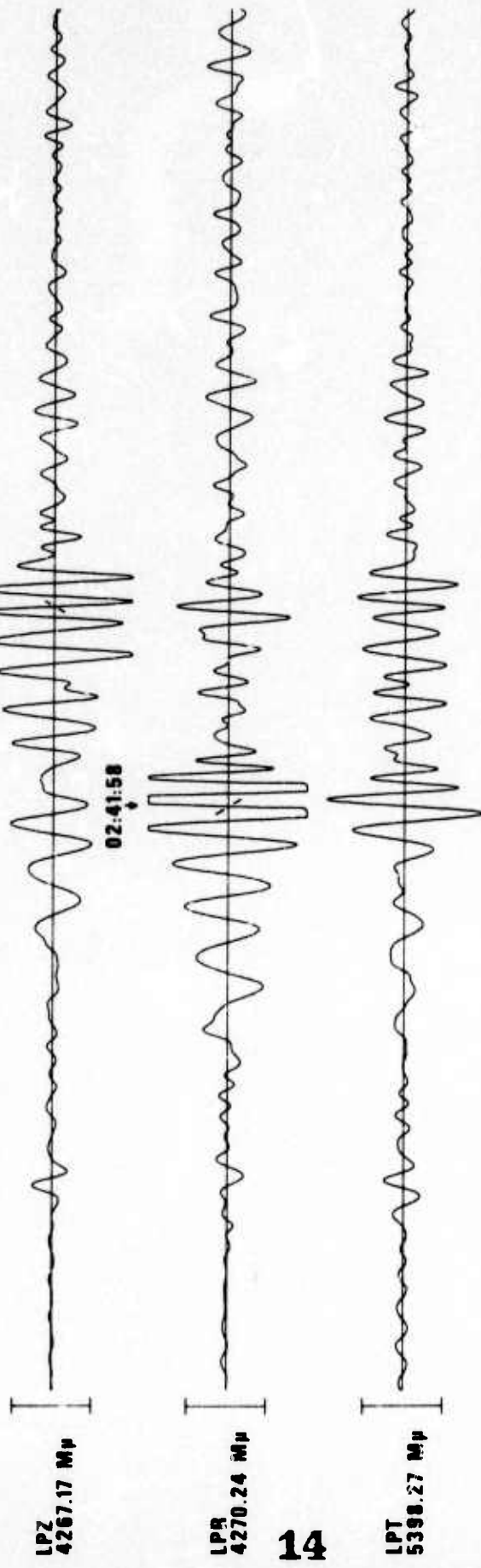


13

TIME



FN-WV 14 JUN 75

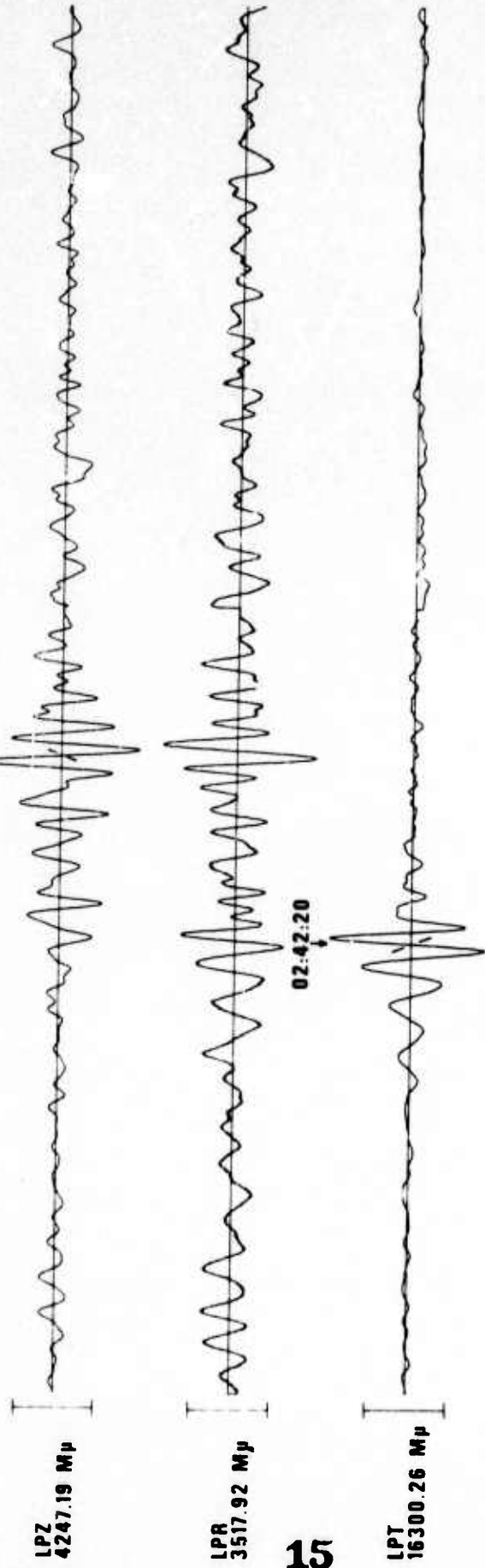


14



TIME

RK-ON 14 JUN 75



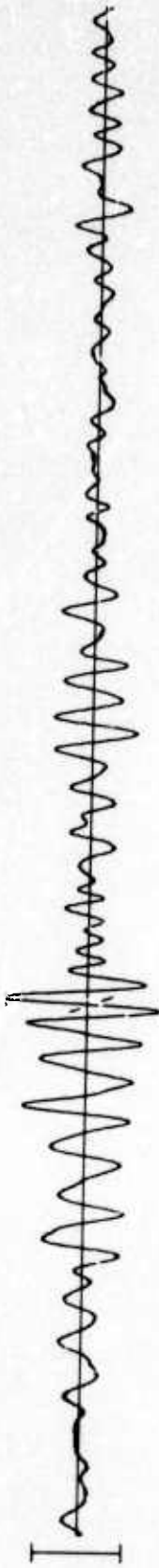
15



TIME

HN-ME 14 JUN 75

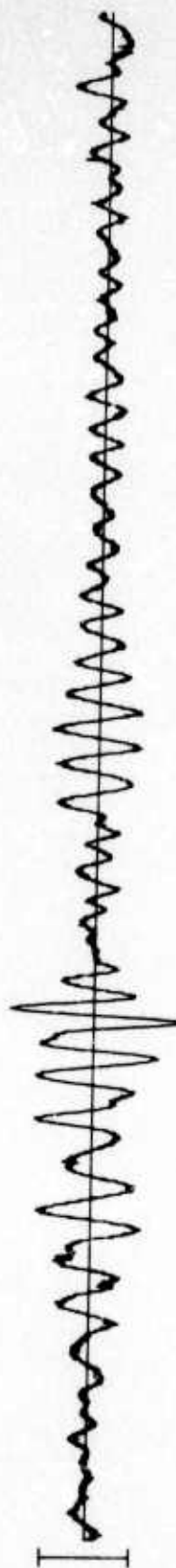
02:50:24



02:47:23



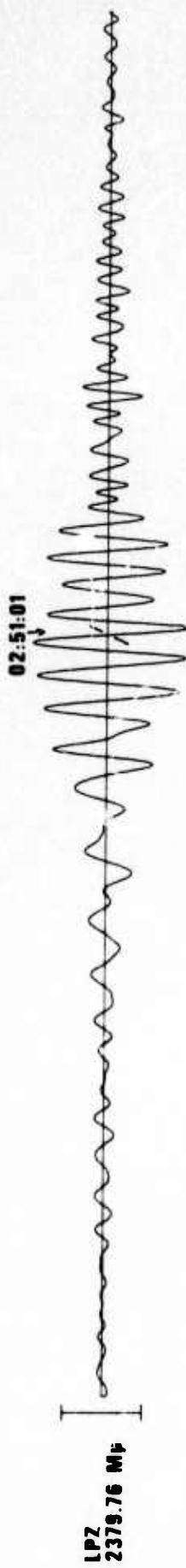
16



TIME



WH2YK 14 JUN 75



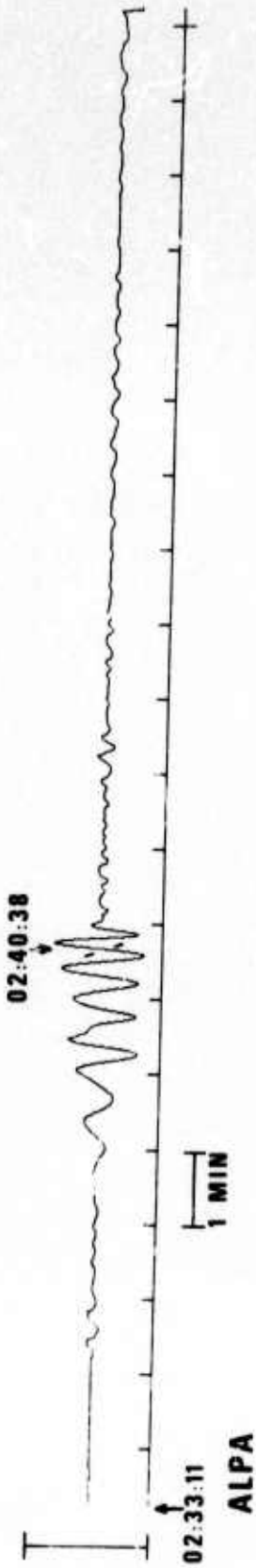
HJ



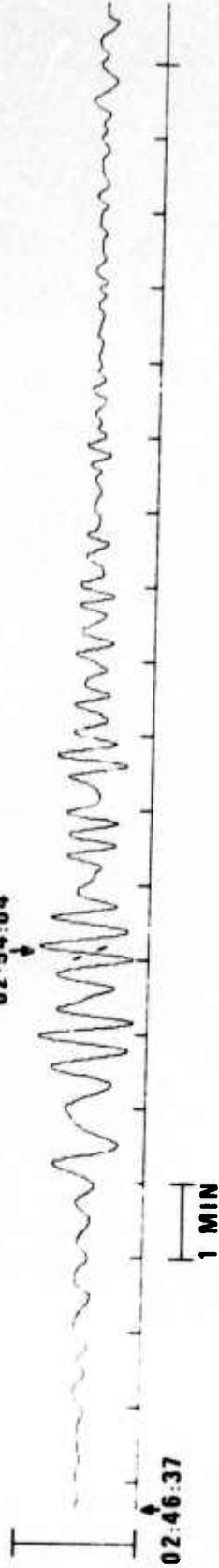
ARRAY LONG PERIOD VERTICAL BEAMS 14 JUN 75

LASA

LP VERTICAL
9181.68 M μ



LP VERTICAL
1596.52 M μ



LP VERTICAL
2703.85 M μ

