

AD-A020 918

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT:
NTS EVENT "MARSH", 6 SEPTEMBER 1975

K. J. Hill, et al

Teledyne Geotech

Prepared for:

Advanced Research Projects Agency

15 December 1975

DISTRIBUTED BY:

NTIS

**National Technical Information Service
U. S. DEPARTMENT OF COMMERCE**

058136

SDCS-ER-75-40



ADA020918

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
NTS Event "MARSH", 6 September 1975

K.J. Hill, M.S. Dawkins, and R.R. Baumstark
Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

December 1975

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

Sponsored By

The Defense Advanced Research Projects Agency
Nuclear Monitoring Research Office
1400 Wilson Boulevard, Arlington, Virginia 22209
ARPA Order No. 2897

Monitored By

VELA Seismological Center
312 Montgomery Street, Alexandria, Virginia 22314

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. Department of Commerce
Springfield VA 22151

Disclaimer: Neither the Defense Advanced Research Projects Agency nor the Air Force Technical Applications Center will be responsible for information contained herein which has been supplied by other organizations or contractors, and this document is subject to later revision as may be necessary. The views and conclusions presented are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Defense Advanced Research Projects Agency, the Air Force Technical Applications Center, or the US Government.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1 REPORT NUMBER SDCS-ER-75-40	2 GOVT ACCESSION NO	3 RECIPIENT'S CATALOG NUMBER
4 TITLE (and Subtitle) SPECIAL DATA COLLECTION SYSTEM (SDCS) NTS Event "MARSH", 6 September 1975		5 TYPE OF REPORT & PERIOD COVERED Technical
		6 PERFORMING ORG. REPORT NUMBER
7 AUTHOR(s) Hill, K. J., Dawkins, M. S., and Baumstark, R. R.		8 CONTRACT OR GRANT NUMBER(s) F08606-74-C-0013
9 PERFORMING ORGANIZATION NAME AND ADDRESS Teledyne 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 22209		12 REPORT DATE 15 December 1975
		13 NUMBER OF PAGES 19
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)		

DD FORM 1473
1 JAN 73

EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

SDCS Event Report No. 40

NTS Event "MARSH", 6 September 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:

	"P" Arrival	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	17:11:33.1	17:00:08	38.3N	115.6W	4.1	N/A

Using RK-ON, CPSO and NORSAR, the epicenter location and magnitude become

	17:00:01.1	37.2N	116.2W	4.3	N/A
--	------------	-------	--------	-----	-----

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at CPSO, RK-ON and NORSAR. High level background noise prevented determination of signal arrivals at WH2YK, HN-ME and FN-WV. At HN-ME all SP channels had unknown operating gains. The SP radial channel at CPSO was extremely noisy. LASA short-period array data were not recoverable.

No long-period signals were recorded at any of the SDCS stations. Data from all LP channels at HN-ME appeared to be invalid. Long-period array data from LASA were not recoverable. ALPA and NORSAR data were not included due to 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.

Stamp/Label with handwritten 'A' and an arrow pointing to it.

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 985 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 979 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.

T R I X

STATION	YR	ARR TIME
RK-ON	75 249 17	4 46.2
CPO	75 249 17	5 22.2
NAO	75 249 17	11 33.1

YR	O-TIME	LAT	LONG
75 249 17	2 29.9	47.078N	80.547W
75 249 17	0 1.1	3'.165N	116.219W
75 249 16	53 3.5	10.123N	172.283W

DATA SUMMARY

6 Sept 75

Sta.	Phase	Arrival Time	Inst.	Per	A/T	Magnitude*		Dist.**
						m_b	M_s	
RK-ON	EP	17:04:46.2	SPZ	0.6	33.6	4.3	--	21.1
CPSO	EP	17:05:22.2	SPZ	1.0	18.9	4.4	--	24.7
NAO	EP	17:11:33.1	AB	0.9	4.4	4.1	--	73.2

Average $m_b = 4.3$

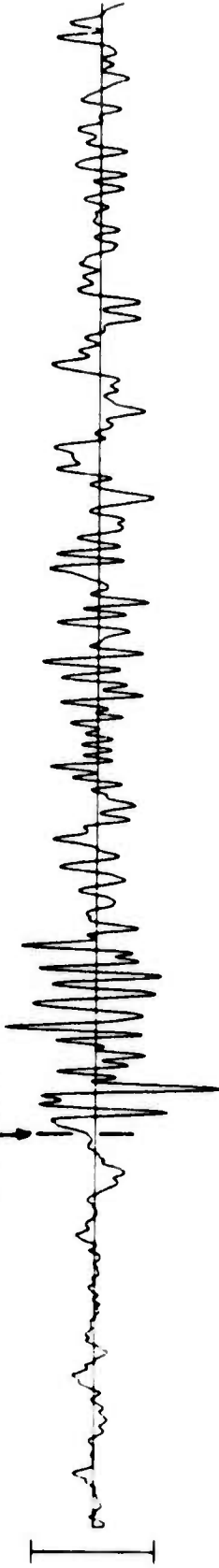
* For event source at surface

** Distances are calculated to TRIX epicenter

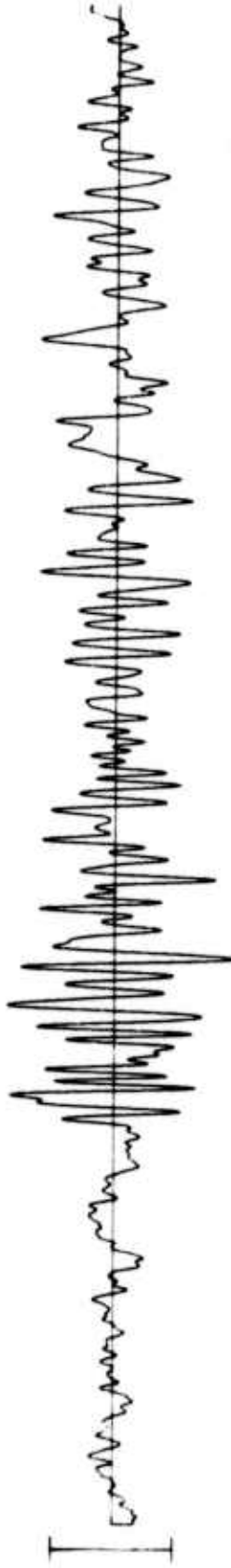
RK-ON 06 SEP 75

**SPZ
39.61 Mμ**

17:04:46.2



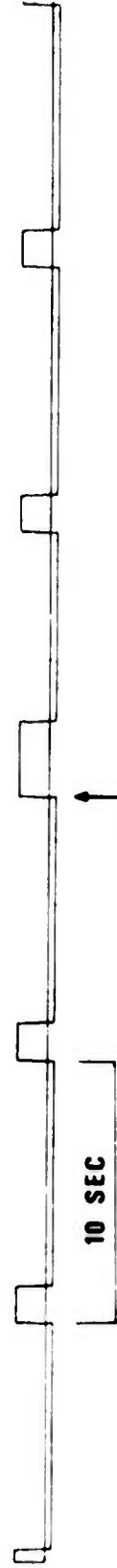
**SPR
23.17 Mμ**



**SPT
10.76 Mμ**



TIME

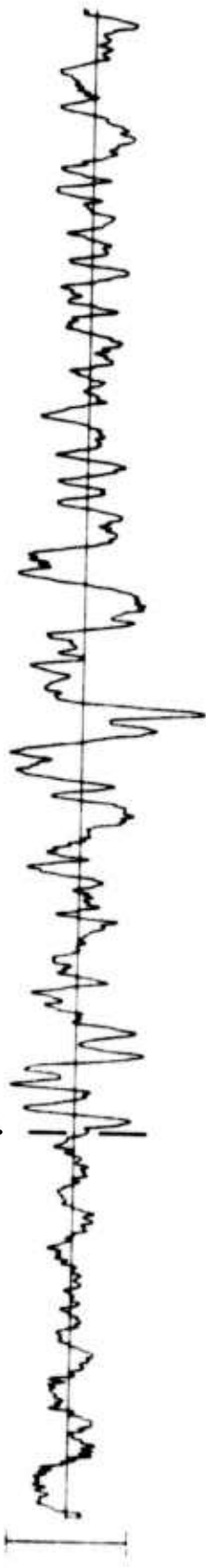


17:05:00

5<

CPSO 06 SEP 75

17:05:22.2



SPZ
20.92 Mμ



SPR
11.39 Mμ



SPT
7.80 Mμ



TIME

17:05:30

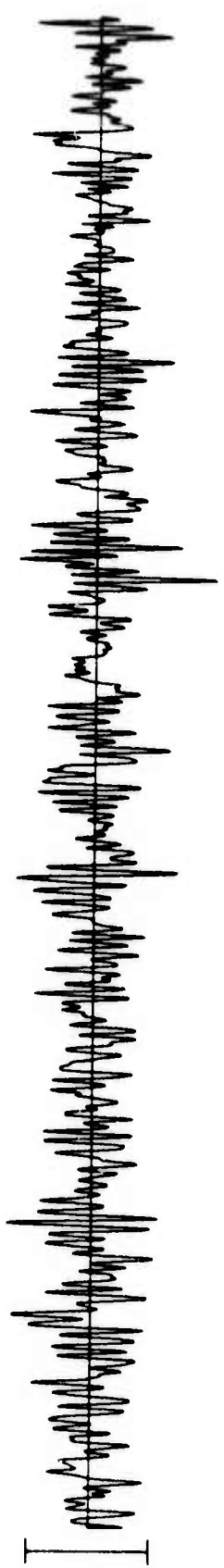
WH2YK 06 SEP 75



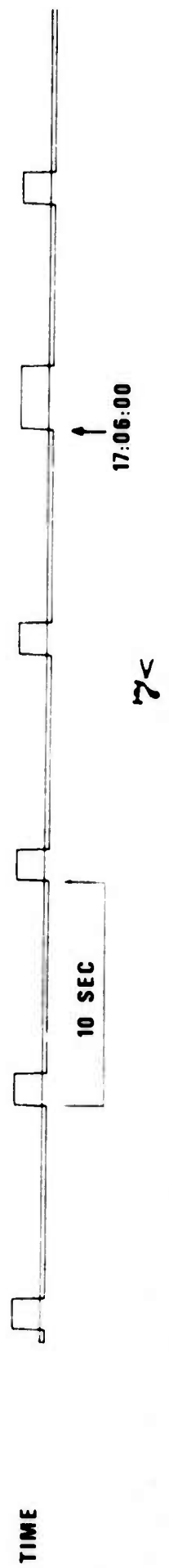
SPZ
8.07 Mμ



SPR
9.05 Mμ



SPT
16.94 Mμ



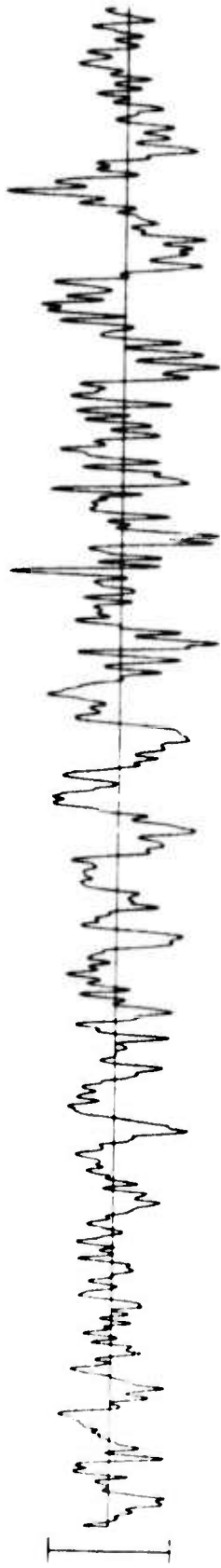
TIME

10 SEC

↑
17:06:00

7<

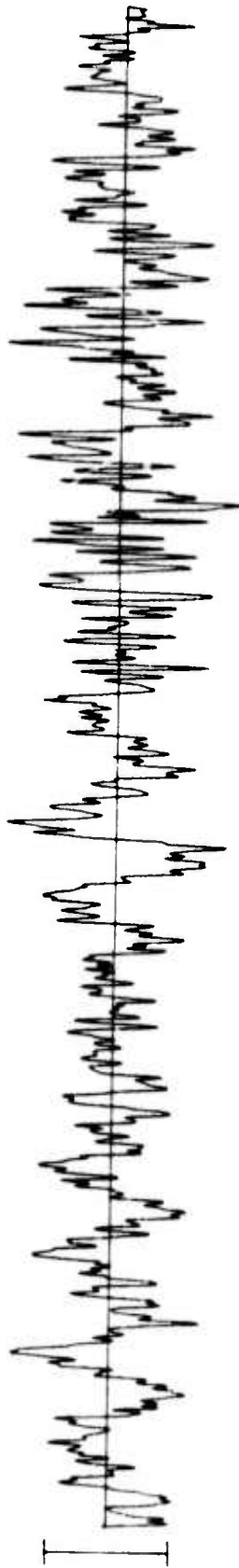
FN-WV 06 SEP 75



SPZ
7.76 M μ



SPR
6.87 M μ



SPT
6.08 M μ



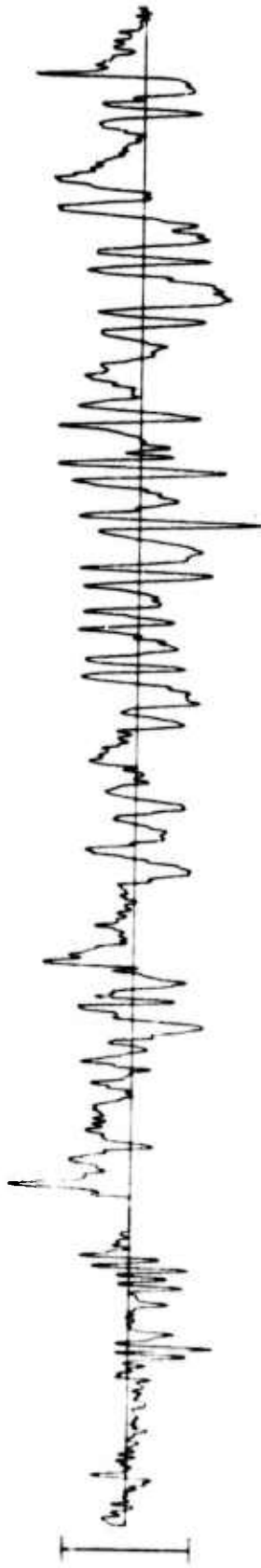
TIME

17:06:10

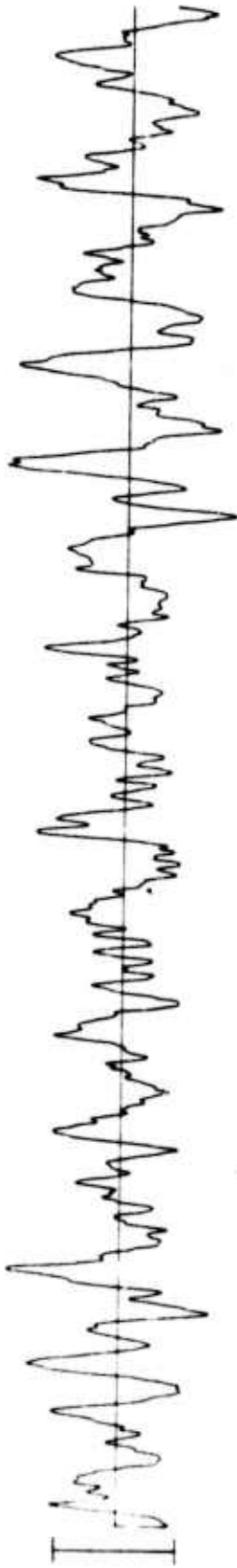
10 SEC

HN-ME 06 SEP 75

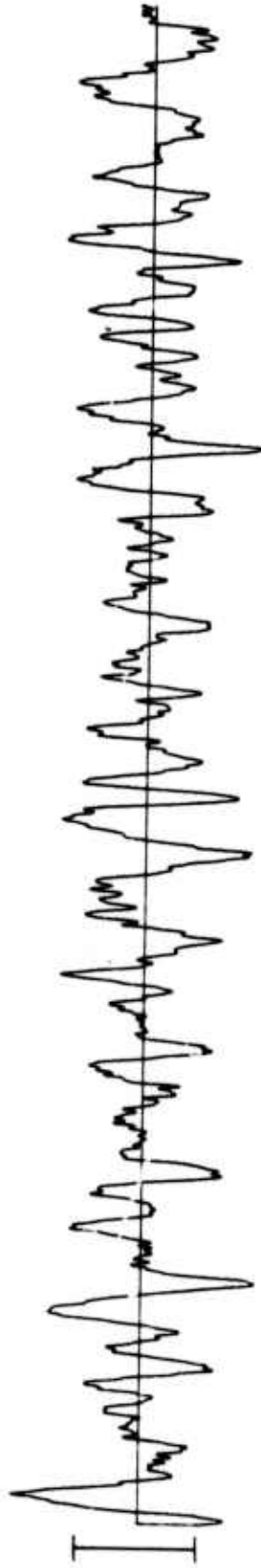
SPZ
UNKNOWN



SPR
UNKNOWN



SPT
UNKNOWN



TIME



10 SEC

INVALID CALIBRATIONS

17:07:20

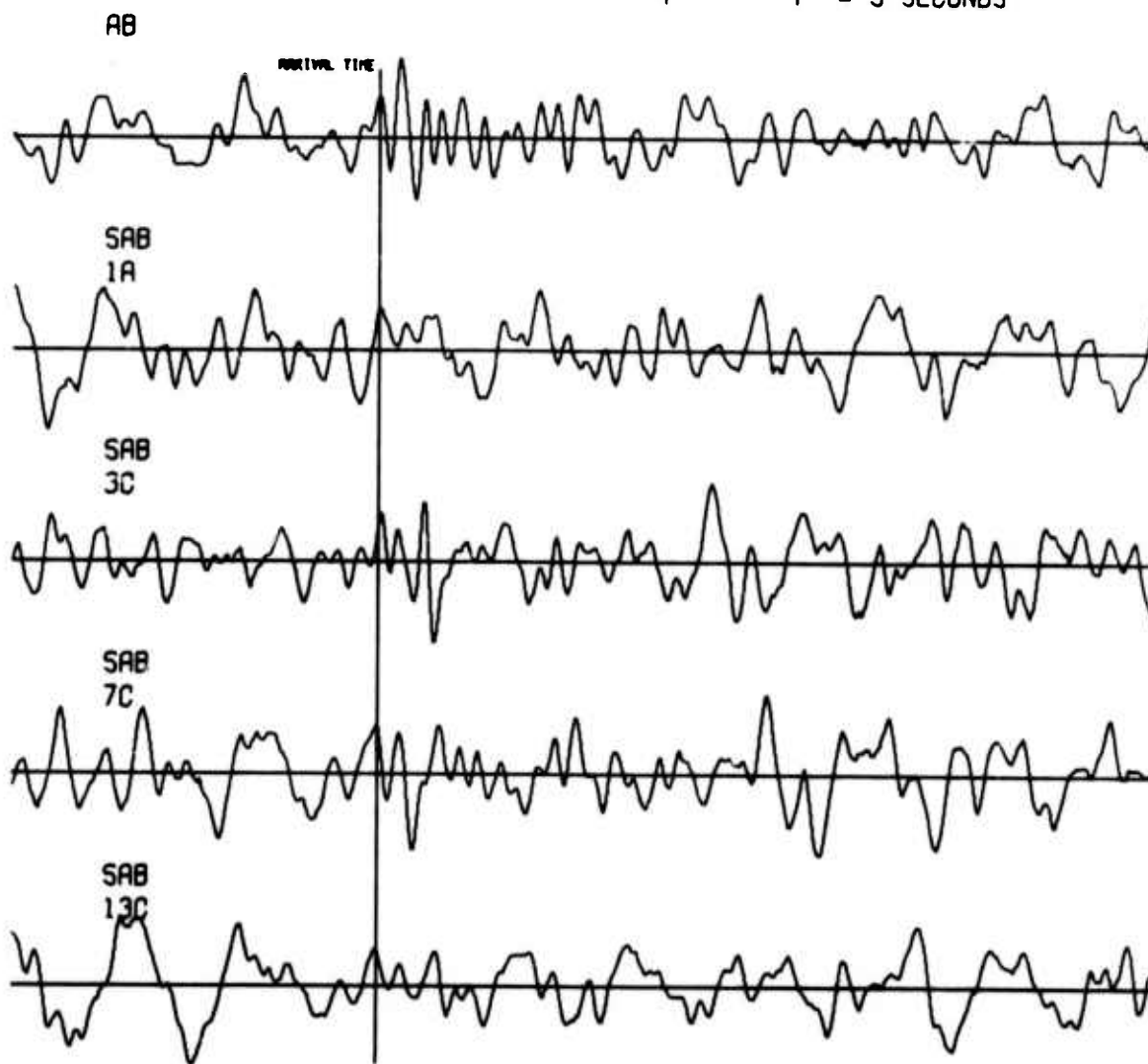
NORSAR EVENT FILE

06 SEP 75

EPX NO. 86350 ARR. 17.11.33.4 38.3N 115.6W 4.1MB 33KM

DIST = 72.0 AZI = 318.3 AMP = 2.0 PER = 0.9

—|—| = 5 SECONDS



RK-ON 06 SEP 75

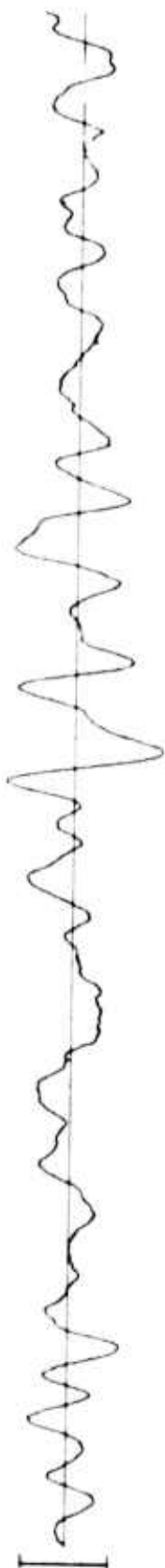
**LPZ
593.19 MP**



**LPR
316.57 MP**



**LPT
297.94 MP**



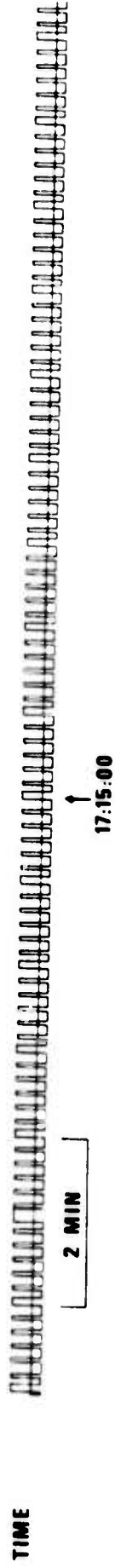
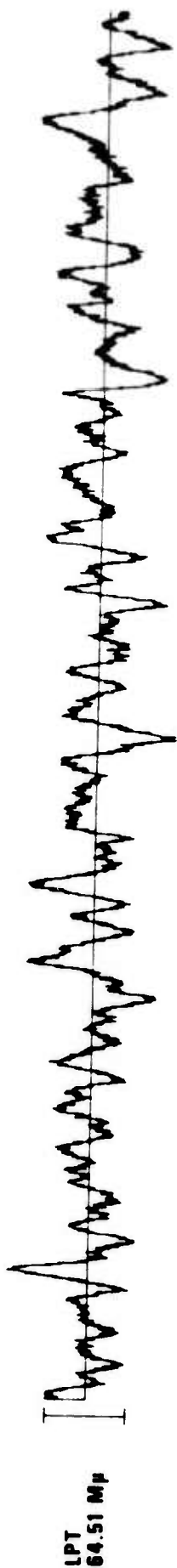
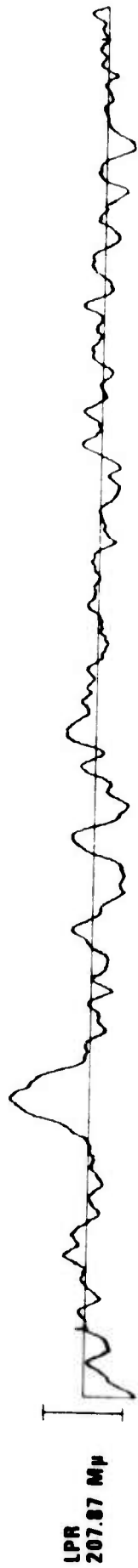
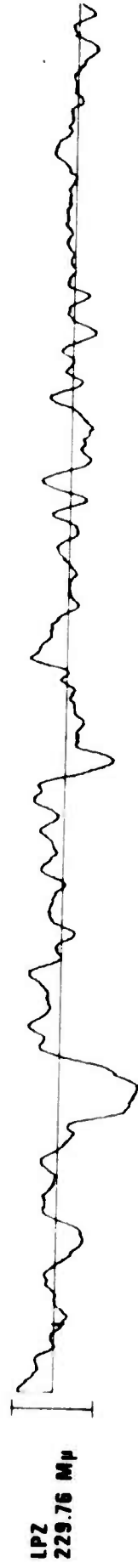
TIME



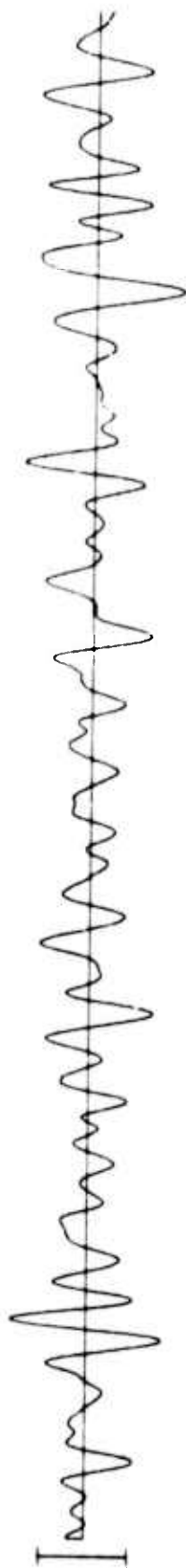
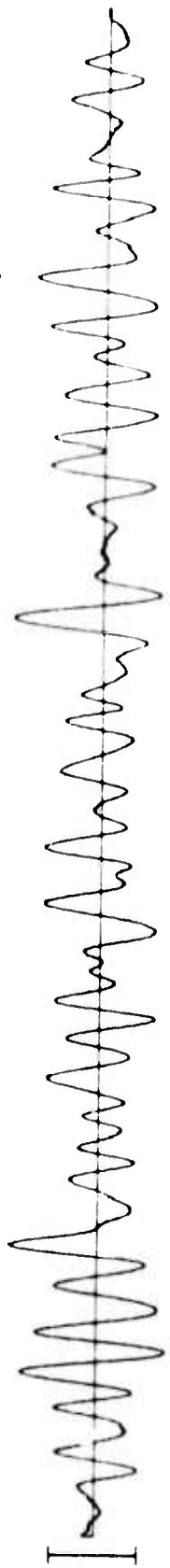
2 MIN

17:15:00

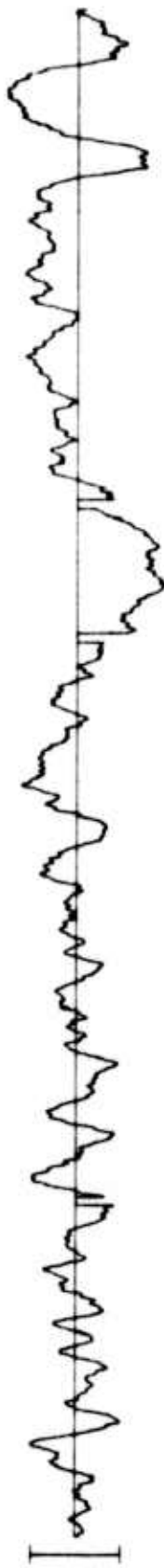
CPSO 06 SEP 75



WH2YK 06 SEP 75



FN-WV 06 SEP 75



HN-ME 06 SEP 75

