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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,  
MINNESOTA, 9 JULY 1975

Teledyne Geotech

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT  
Minnesota, 9 July 1975**

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**February 1976**

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SDCS EVENT REPORT NO. 66

Minnesota, 9 July 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:

	Origin Time	Lat.	Long.	$m_b$	$M_s$
PDE	14:54:14.9	45.5N	096.1W	N/A	N/A

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

	14:54:17.2	45.4N	096.2W	N/A	N/A
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All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at CPSO, HN-ME, RK-ON, FN-WV and LASA. WH2YK did not record a "P" arrival for this event and was not included in this report. Horizontal SP channels at CPSO, HN-ME, RK-ON and FN-WV were rotated. NORSAR did not report a "P" arrival for this event.

Long-period signals were recorded at CPSO and HN-ME. No signal arrival determinations were made at WH2YK, RK-ON and FN-WV because signals were mixed with event from Eastern China. Horizontal LP channels at all SDCS stations were rotated. ALPA, LASA and NORSAR long-period data were not recoverable.

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

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	853	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            9 JUL 75  
 14:53:53.0    46.000N    97.500W    0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST		
FK-CN	14 55 42.0	0.3	-0.2	5.7	16.3
IAC	14 56 02.0	-0.2	-0.1	7.1	283.6
CISC	14 57 18.7	1.0	0.7	12.7	137.0
FN-WV	14 57 36.0	-1.2	-1.5	14.2	113.2
FN-ME	14 58 47.2	0.1	1.1	19.6	77.8

67 HERRIN TRAVEL TIME TABLES

ORIGIN	IAT.	ICNG.	DEPTH (KM)	SDV	IT	STA
14:54:07.3	45.446N	96.116W	-87. CAIC	0.8	6	5
14:54:17.2	45.433N	96.168W	0. REST	1.0	3	5

CAIC			REST		
0	0	0	0	0	0
0	1.2	0	0	1.2	0
0	0.2	0	0	0.2	0
0	0	0	0	0	0
0	0	0	0	0	0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 2.59  
 MAJCF 47.0KM. MINCF 30.6KM. AZ= 32 AREA= 4524 SQ.KM. REST



DATA SUMMARY

INPUT FOR EVENT 9 JOI 75  
 14:53:53.0 46.000N 97.500W 0KM.

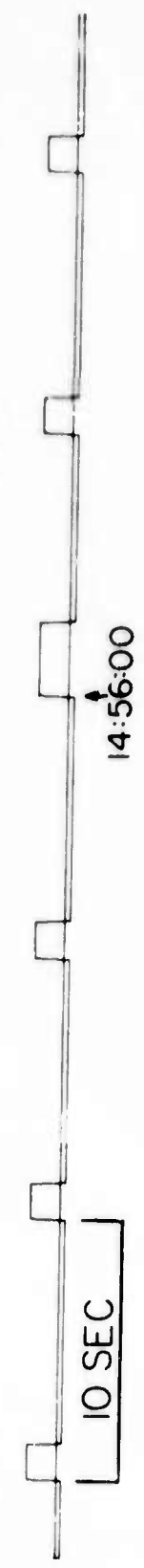
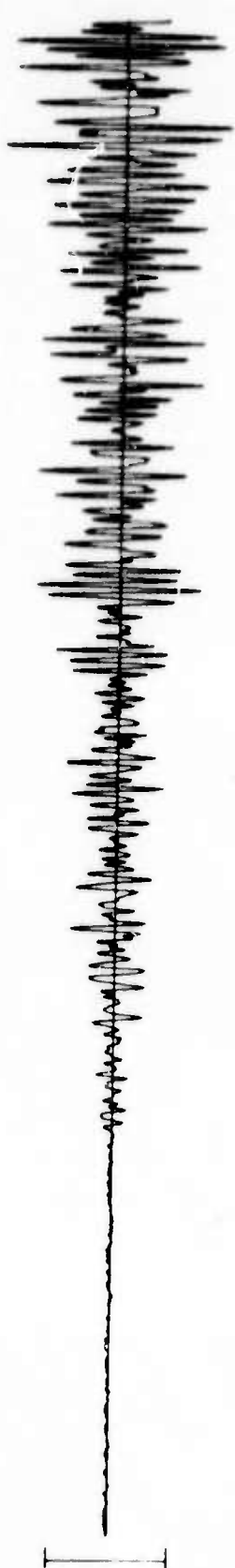
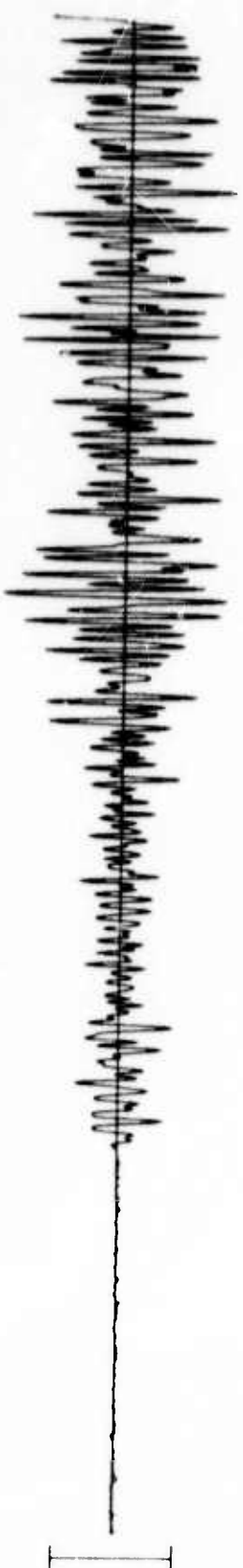
STA.	PHASE	ARRIVAL		INST	FEE	P/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
FK-CNP	EP	14 55	42.0	SFZ	0.5	101.	5.24			5.7
IAC M	EP	14 56	02.0	SAE	0.8	232.	5.89			7.1
CFSC M	EP	14 57	18.7	SFZ	0.5	64.	5.54			12.7
CFSC	IC	15 01	24.0	LFT	17.0	137.				
FN-WVM	EP	14 57	36.0	SFZ	0.5	32.	4.76			14.2
HN-MEM	EP	14 58	47.2	SFZ	0.6	7.	3.55			19.6
HN-PE	IC	15 05	13.0	LFT	18.0	73.				
HN-ME	IR	15 06	04.0	LFZ	14.0	71.	4.26			19.6

CFIGIN	LAT.	LCNG.	DEPTH (KM)	MAG	SDV	STA
14:54:07.3	45.446N	96.116W	0. CAIC	0.0	*****	0
14:54:17.2	45.433N	96.166W	0. REST	0.0	*****	0

Short-period magnitudes ( $m_b$ ) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

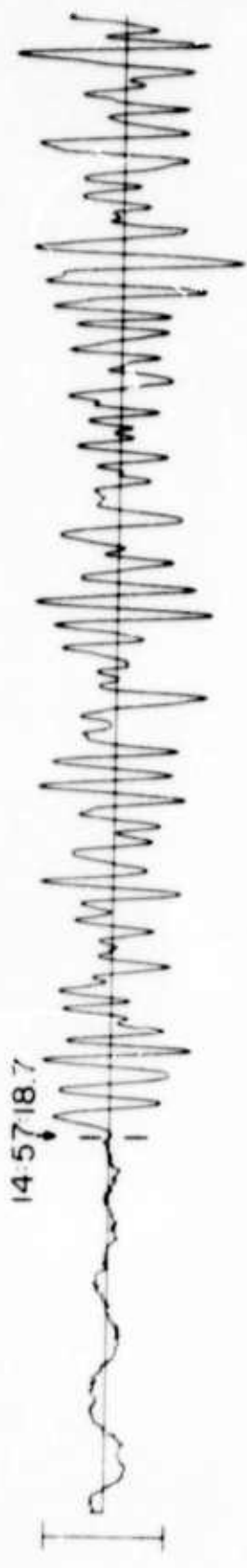
Average long-period magnitude ( $M_s$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RIK-ON 9 JUL 75



51

CPSO 9 JUL 75



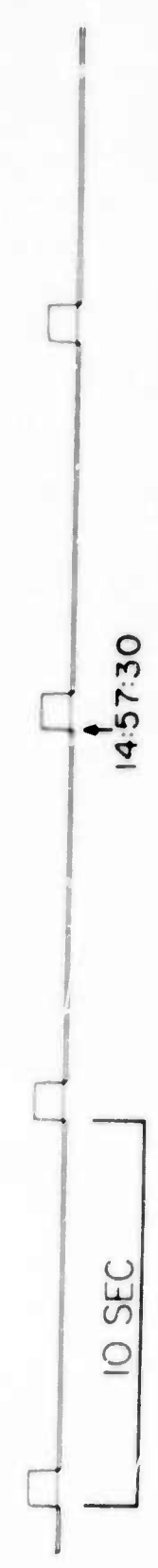
SPZ  
52.89 MU



SPR  
71.40 MU



SPT  
39.20 MU



TIME

21

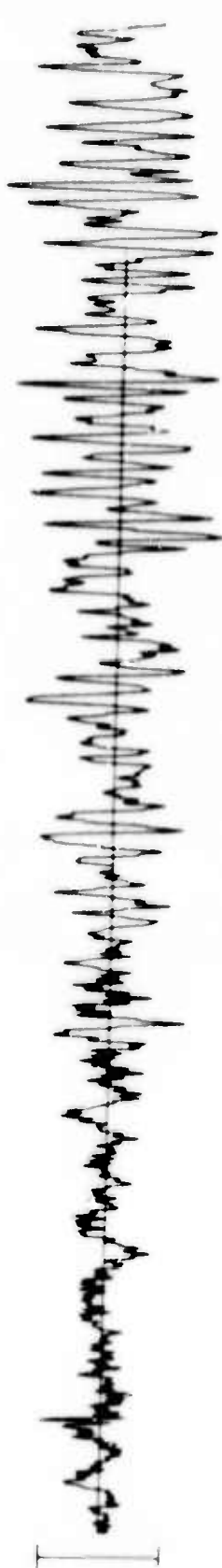
FN-WV 9 JUL 75



SPZ  
35.00 MU



SPR  
46.17 MU



SPT  
18.69 MU

TIME



10 SEC

14 57 50

HN--ME 9 JUL 75

14:58:47.2

SPZ  
10.54 MU



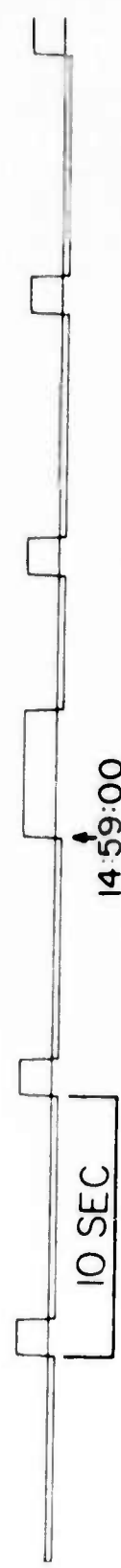
SPR  
11.30 MU



SPT  
8.61 MU



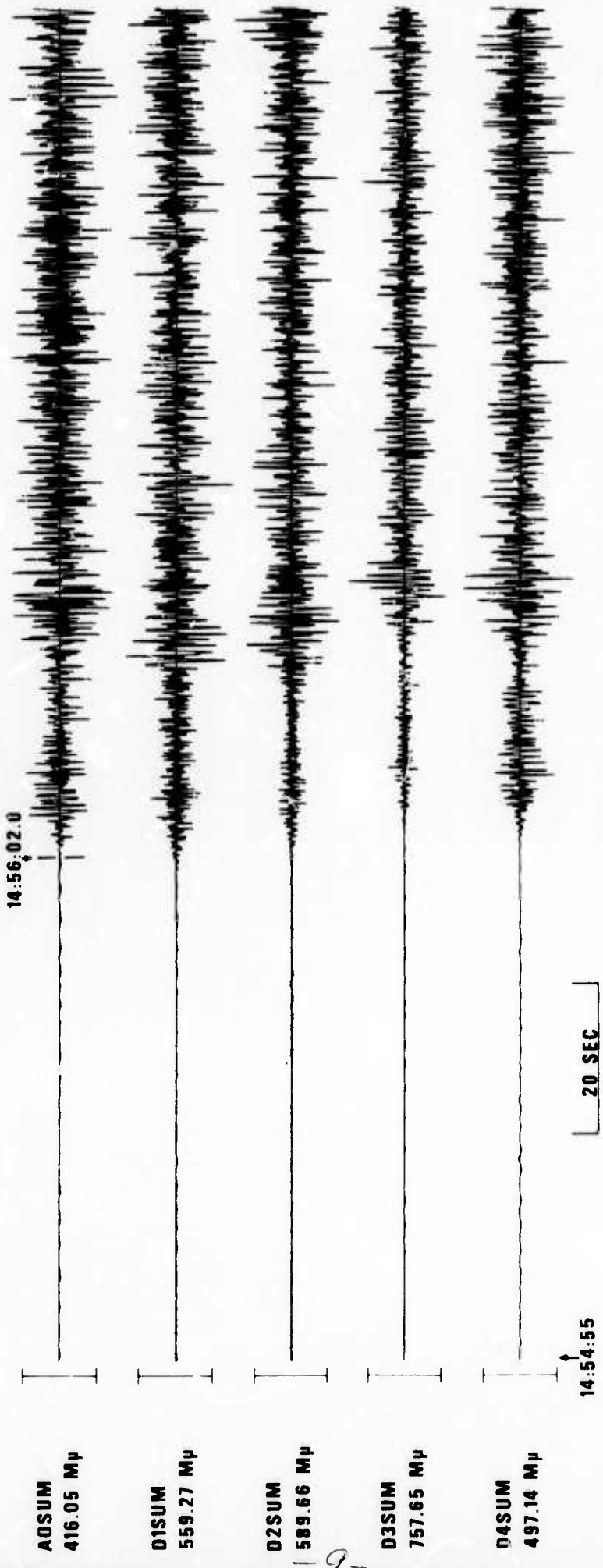
TIME



10 SEC

14:59:00

LASA INFINITE VELOCITY SUBARRAY SUMS 09 JUL 75



A0SUM  
416.05 M $\mu$

D1SUM  
559.27 M $\mu$

D2SUM  
589.66 M $\mu$

D3SUM  
757.65 M $\mu$

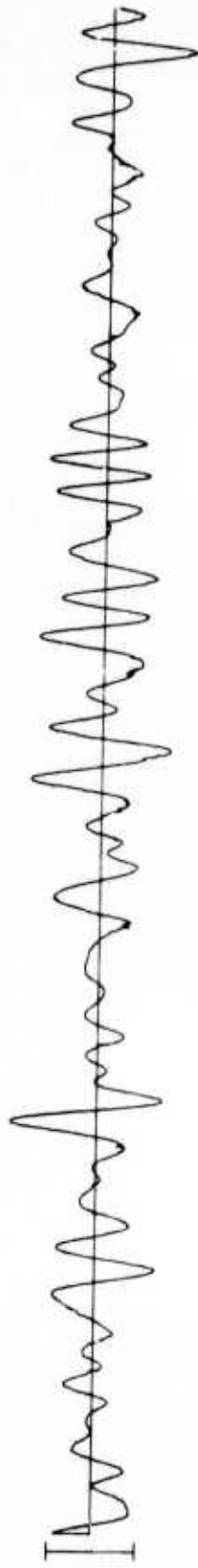
D4SUM  
497.14 M $\mu$

20 SEC

14:54:55

14:56:02.0

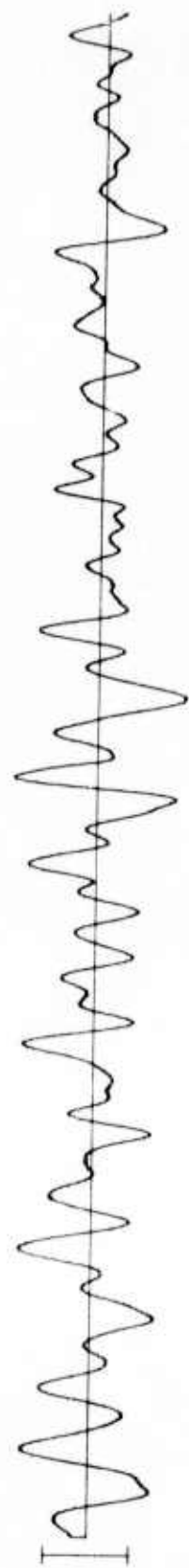
RK-ON 9 JUL 75



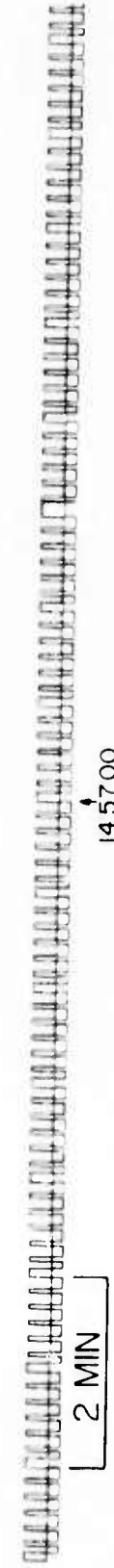
LPZ  
4288.84 MU



LPR  
1253.42 MU



LPT  
680.98 MU



TIME

2 MIN

14 57 00

CPSO 09 JUL 75

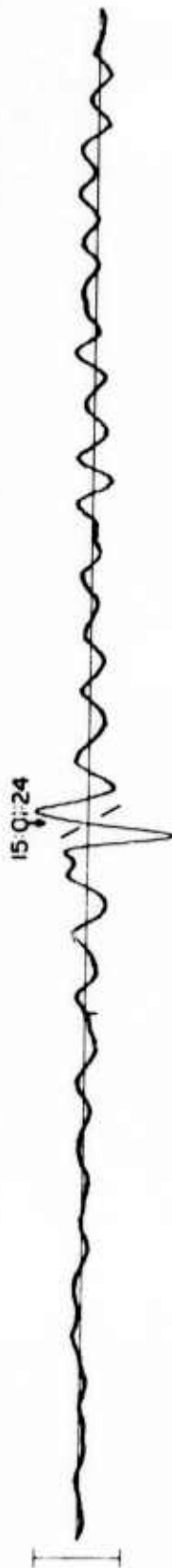
LPZ  
238.66 MU



LPR  
240.43 MU



LPT  
1176.58 MU



TIME





FN-WV 9 JUL 75

LPZ  
307.33 MU

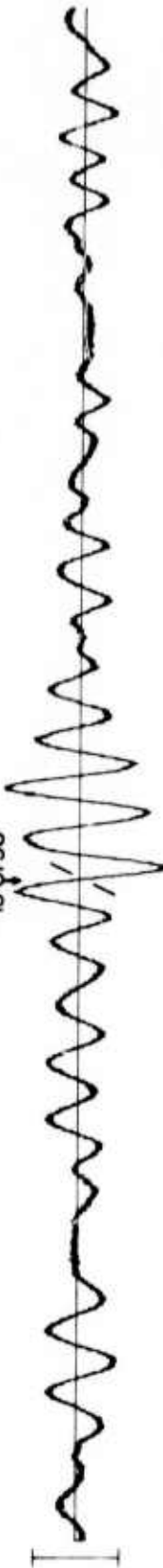


LPR  
649.27 MU

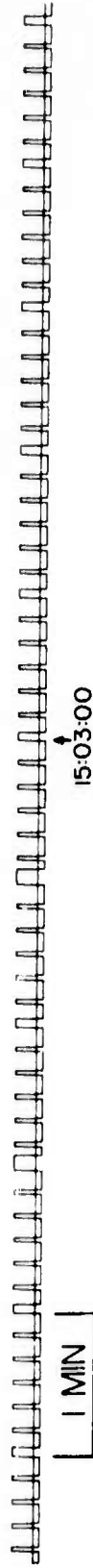


POSSIBLE LQ  
15:01:58

LPT  
447.73 MU



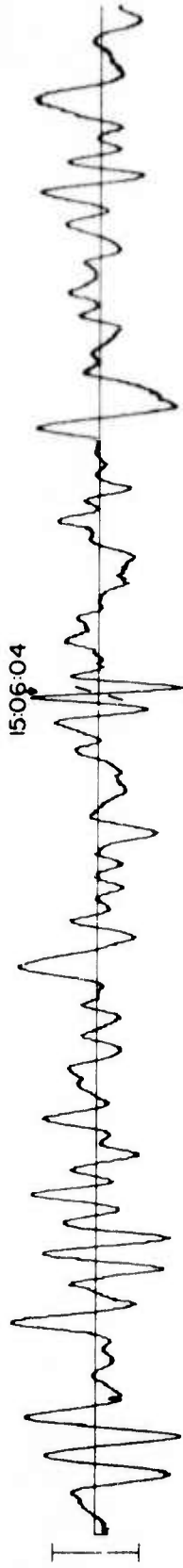
TIME



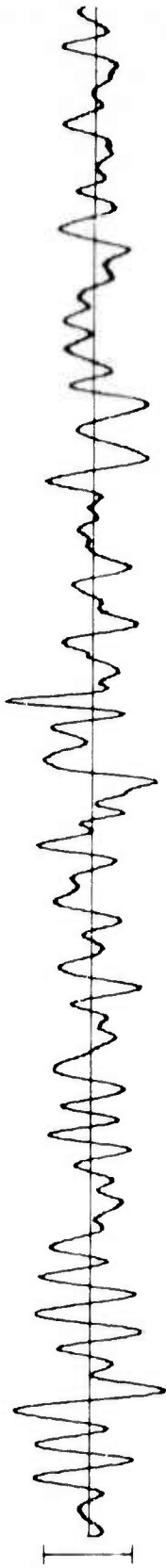
1/2

HN-ME 9 JUL 75

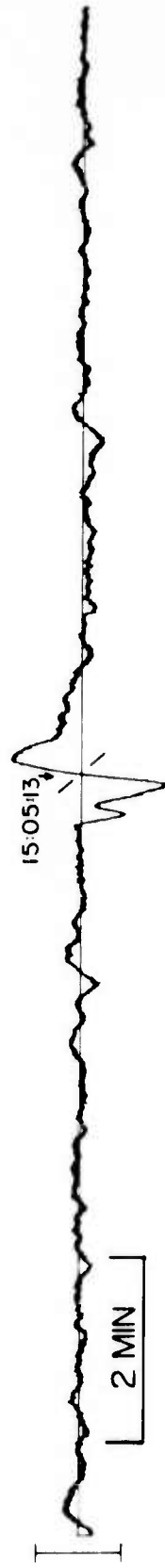
LPZ  
290.13 MU



LPR  
153.00 MU



LPT  
820.64 MU



WH2YK 9 JUL 75

