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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT,  
EASTERN KAZAKH, 20 FEBRUARY 1975

J. R. Woolson, et al

Teledyne Geotech

Prepared for:

Defense Advanced Research Projects Agency  
Air Force Technical Applications Center

September 1975

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Eastern Kazakh, 20 February 1975**

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**September 1975**

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SDCS Event Report No. 8

Eastern Kazakh, 20 February 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	Latitude	Longitude	$m_b$	$M_s$
NORSAR	05:33:03	50 N	078 E	5.6	N/A
LASA	05:32:58	48.4N	079.6E	5.9	N/A
PDE	05:32:58	49.8N	078.1E	5.7	N/A
Hagfors Array, Sweden	05:33:02	50 N	077 E	6.1	N/A

Using SDCS stations, LASA, TFO, and NORSAR, the epicenter location becomes

SDCS & Arrays	05:33:06	51.0N	077.9E	5.6	N/A
---------------	----------	-------	--------	-----	-----

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.

RK-ON and FN-WV were not operational. There were no calibrations available on the CPSO analog tape covering this event time window, therefore the CPSO magnifications were unobtainable. Calibrator problems at HN-ME precluded accurate determination of short-period magnification levels at that site. LASA, NORSAR and ALPA long-period data were not recovered.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES			ELEVATION METERS	INSTRUMENTATION	
		DEG	MN	SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14	00.0	N	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4	N	574	6480	V
		085 34	13.5	W		7515	H
FN-WV	Franklin, West Virginia	38 32	58.0	N	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0	N	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0	N	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49	25.4	N	379	HS10	7505A V 8700C H
		010 49	56.5	E			
RK-ON	Red Lake, Ontario	50 50	20.0	N	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0	N	853	18300	SL210 V SL220 H
		134 58	02.0	W			

Notes:

Details of the program used to obtain beamed vertical, radial and transverse data at LASA, ALPA and NORSAR are in the process of being reviewed. Vertical beams are probably valid, horizontal beams at the LASA and NORSAR are questionable. Horizontal beams at ALPA are probably invalid.

FN-WV, RK-ON, WH2YK and HN-ME horizontal instruments are oriented radial and transverse to the Nevada Test Site. CPSO is oriented N-S and E-W. LASA, NORSAR and ALPA beams have been rotated to radial and transverse with respect to the event location.

### HYPOCENTER DETERMINATION

INPUT FOR EVENT      20 FEB 75  
 05:33:00.0    50.000N    78.000E    0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
NAC	05 40 18.3	0.0	0.2	37.2	311.8
WH2YK	05 43 50.0	-0.4	-0.4	65.6	17.0
HN-MF	05 45 10.2	0.7	0.3	78.9	336.6
LAC	05 45 30.6	0.4	0.2	82.7	2.8
CFO	05 46 16.8	-1.7	-1.8	92.6	346.5
TEO	05 46 30.2	1.0	1.4	94.8	7.6

#### 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
05:33:32.2	52.163N	77.372E	165. CALC	1.0	8	6
05:33:06.1	50.964N	77.852E	0. REST	1.0	3	6

CALC				REST			
1	2	3	0	1	2	3	0
0	0.	0	0	0	0.	0	0
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.	0	0	0	.	0	0
0	.	0	0	0	.	0	0

CHIC COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 0.94  
 MAJOR 173.4KM. MINOR 39.2KM. AZ= 1 AREA= 21346 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 20 FEB 75  
 05:33:00.0 50.000N 78.000E OKM.

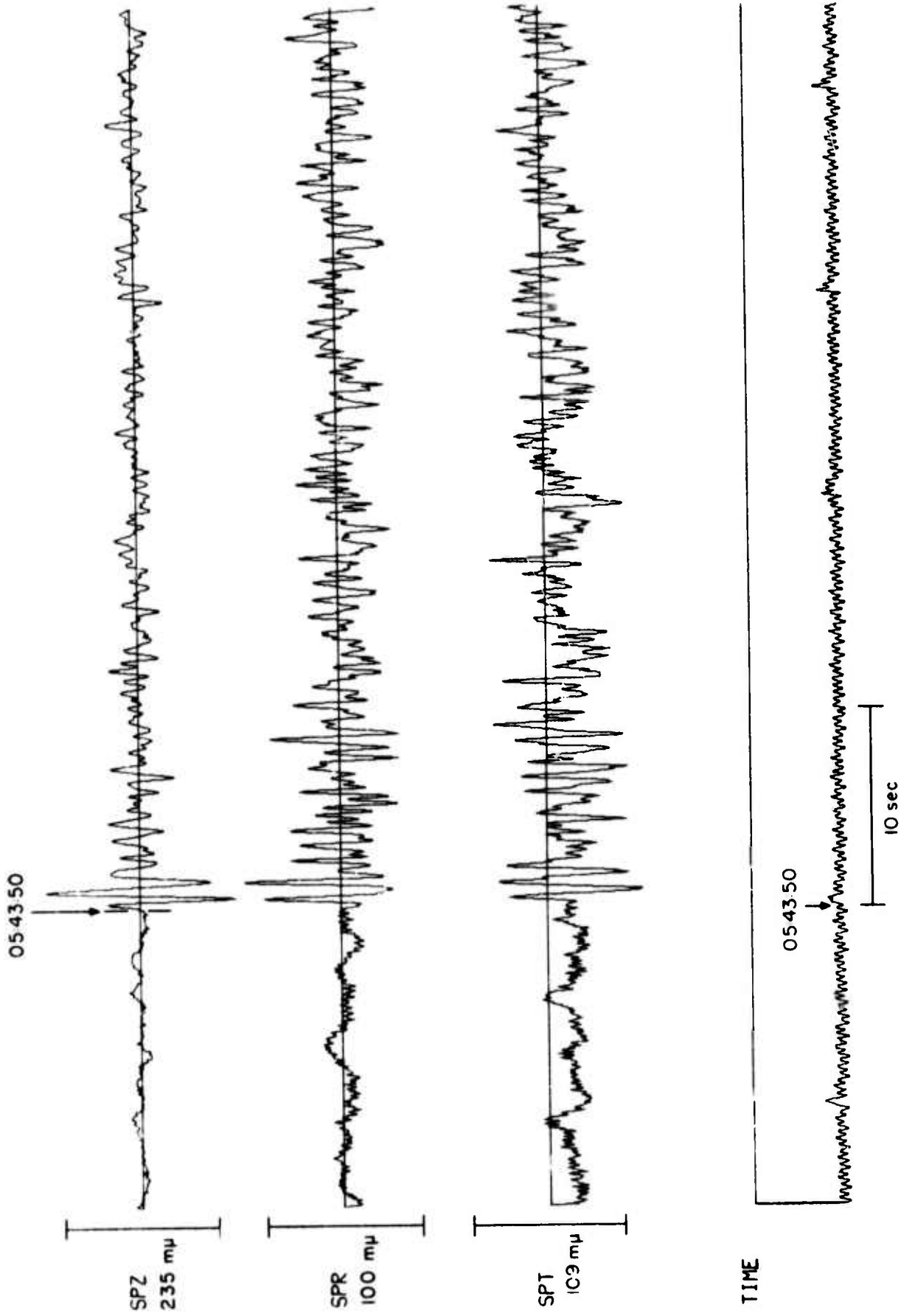
STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
NAO	EP	05 40	18.3	AB	0.6	117.	5.27			37.2
WH2YK	EP	05 43	50.0	SPZ	0.8	215.	6.03			65.6
HN-ME	EP	05 45	10.2	SPZ	0.6	9999.				
LAO	EP	05 45	30.6	AB	0.9	195.	5.96			82.7
CPO	EP	05 46	16.8	SPZ	1.2	9999.				
TFO	EP	05 46	30.2	SPZ	1.0	25.	5.27			04.8

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA
05:33:32.2	52.163N	77.372E	165. CALC	5.37	0.24	u
05:33:06.1	50.964N	77.852E	0. REST	5.63	0.42	u

5.



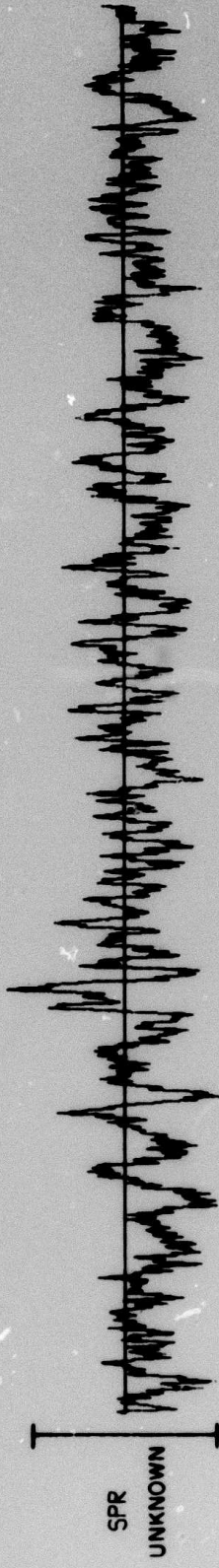
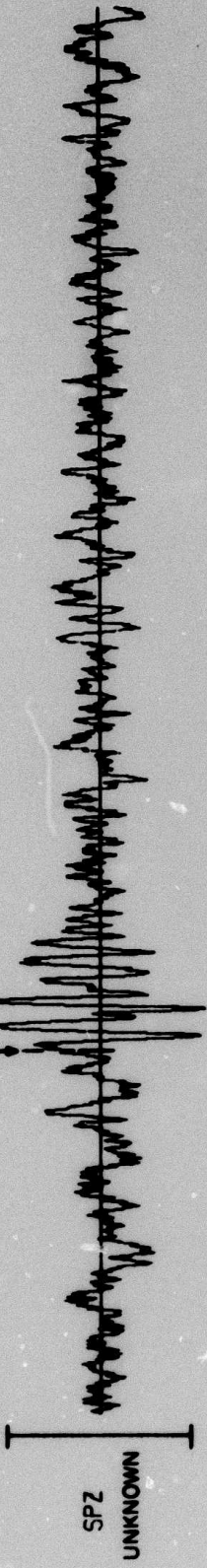
WH2YK 20 FEB 75



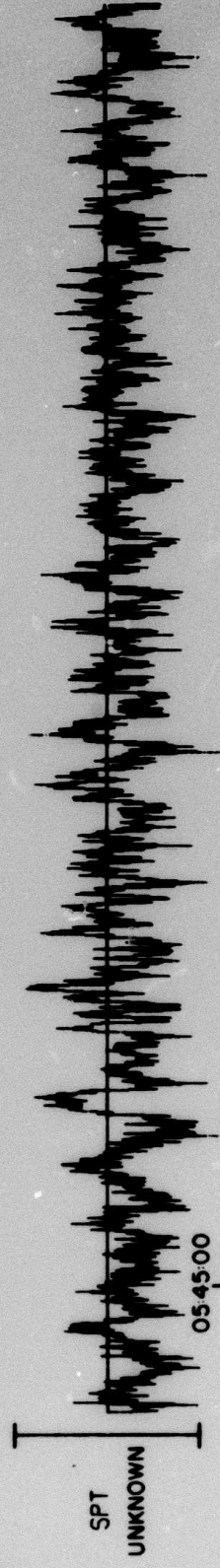
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HN-ME 20 FEB 75

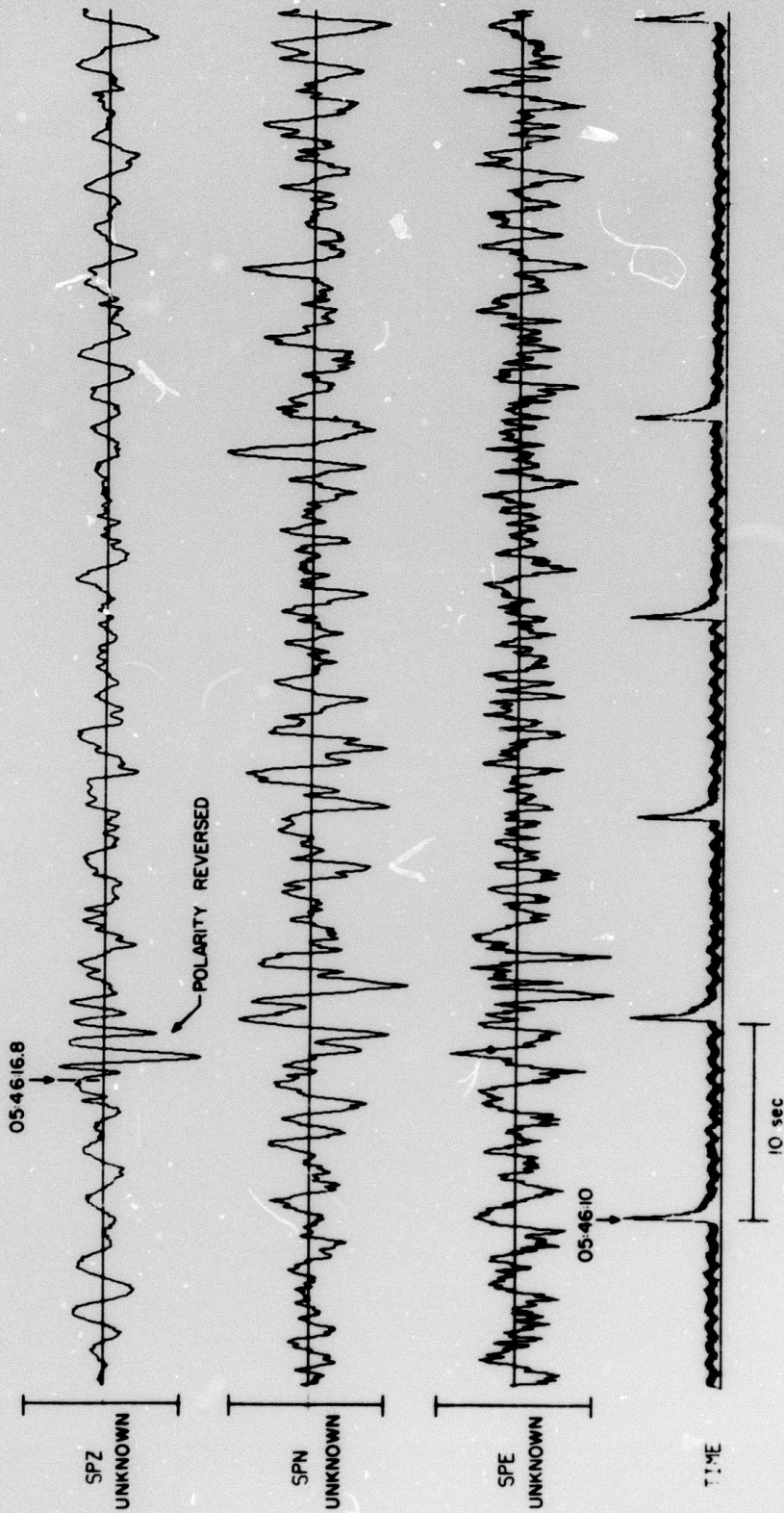
05:45:02



7.



CPSC 20 FEB 75



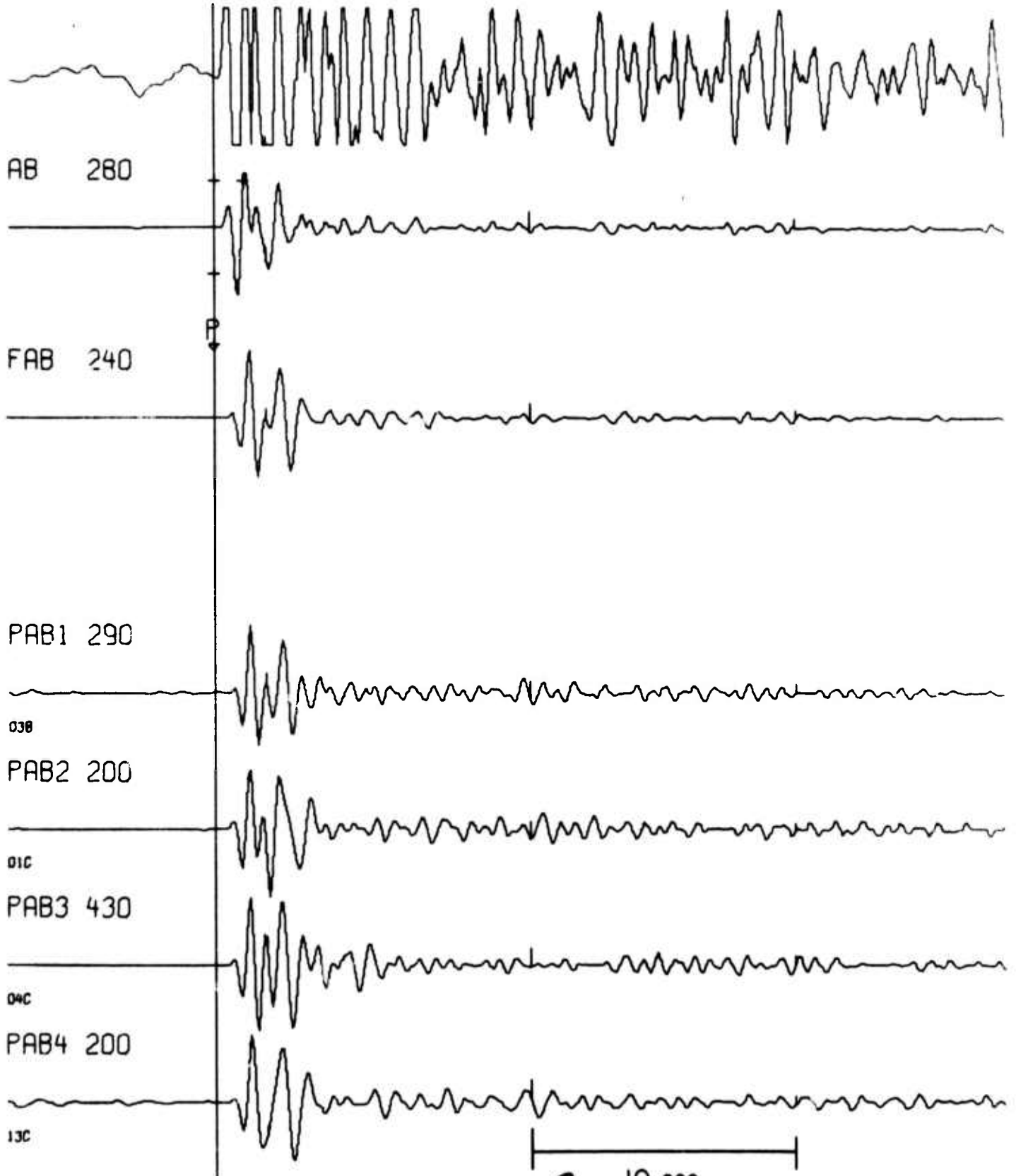
8.

NORSAR

NORSAR SEISMO BULLETIN FOR 20 FEB 1975 (DAY 51/75) FORMAT 5  
1 20 FEB 1975  
2 5 32 53 49.1N 79.6E 330 B 5.6 329 EASTERN KAZAKH SSR  
3 5 40 18.1 01A P 108.8 1.1 13.8 39.3 77.4

EP EXECUTION NO. 29710  
ABN 23 NM

BP-B  
0.6-2.0 HZ ORDER 3 FILTER



9. 10 sec

LASA

1 20 FEB 1975

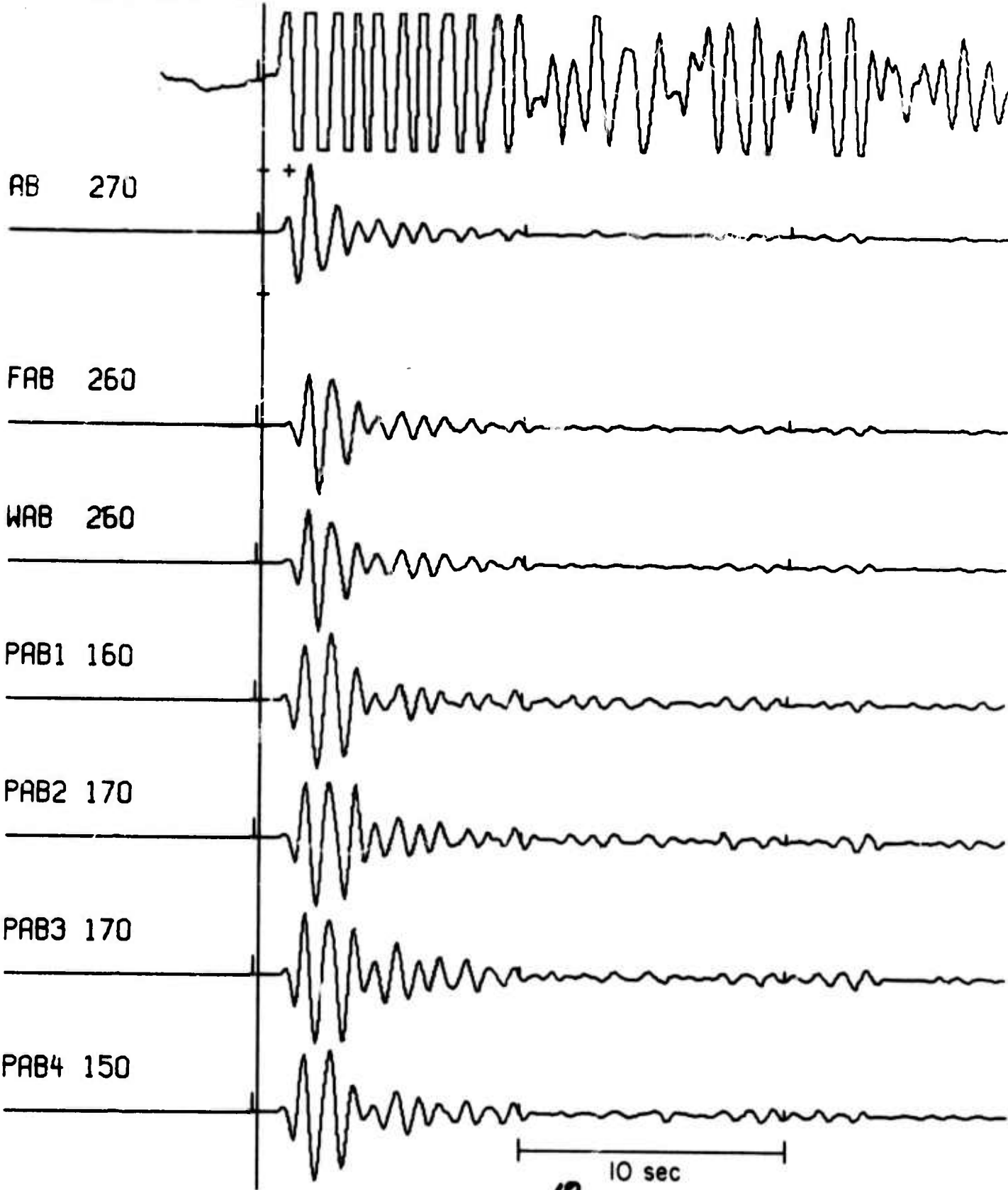
2 5 32 58 48.4N 79.6E 33C C 6.0 329 EASTERN KAZAKH SSR

3 5 45 30.2 LAO P 130.1 1.0 22.5 85.3 356.1

EPX 95535

BP-B

0.6-2.0 HZ ABN 12



10.

10 sec

TFSO SHORT PERIOD 20 FEBRUARY 75

TCDMG

MS

BFV 2.7 K

05:46:30.2\*

Z60SP 960 K

N60SP 960 K

E60SP 800 K

Z60LL 5 K

N60LL 7 K

E60LL 5 K

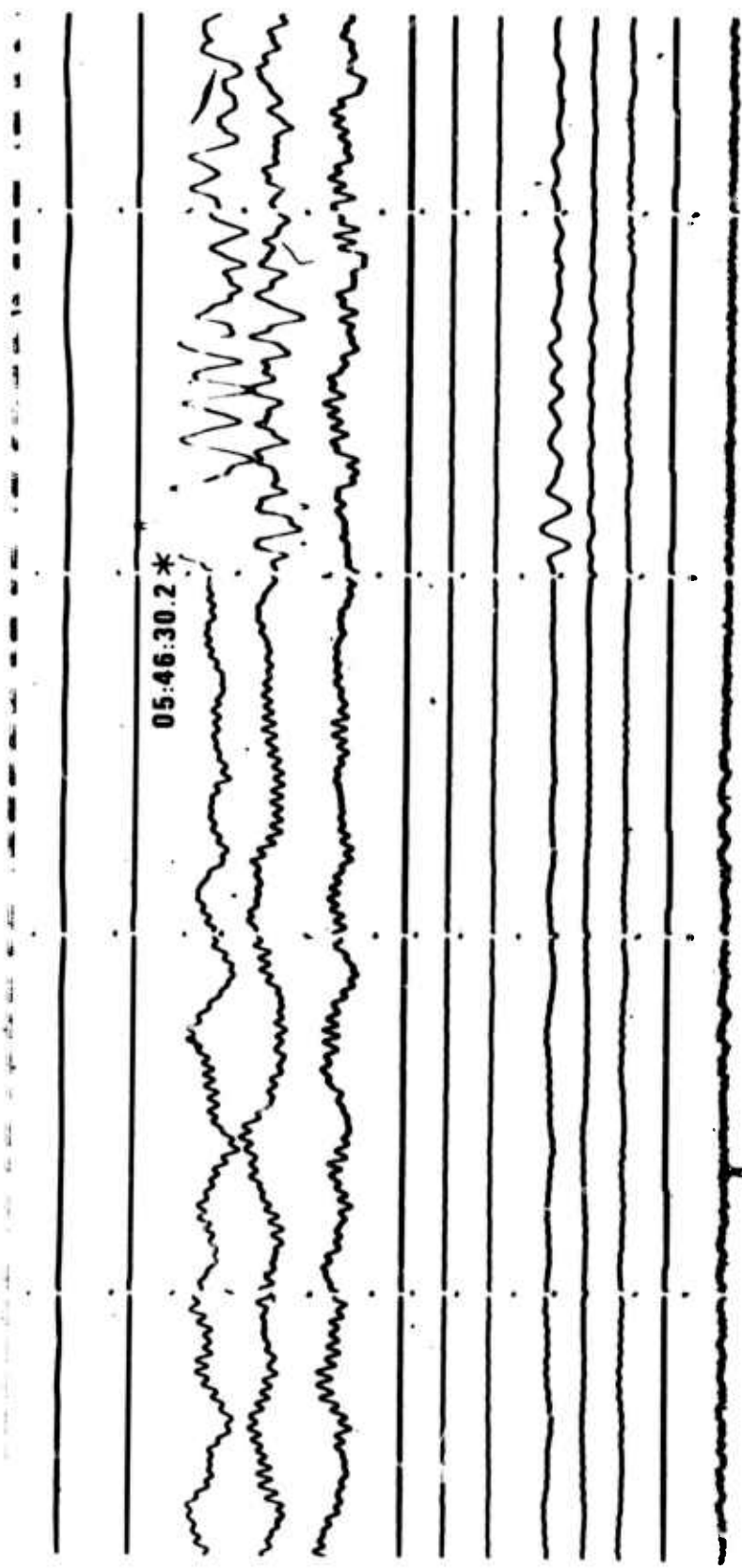
Z60SL 160 K

N60SL 120 K

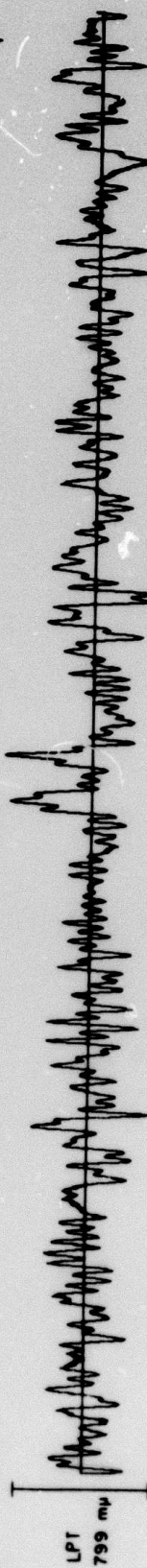
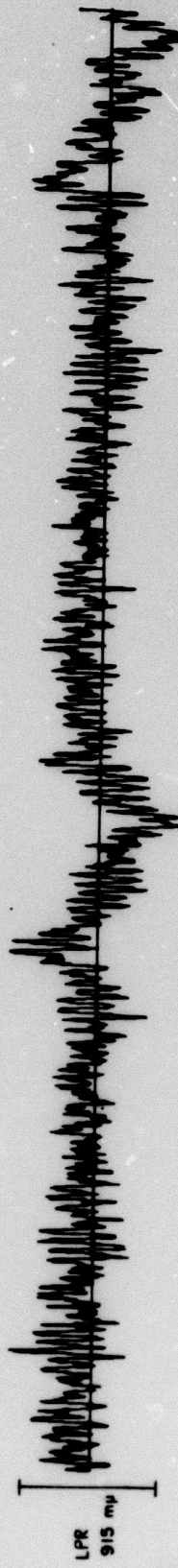
E60SL 120 K

WI

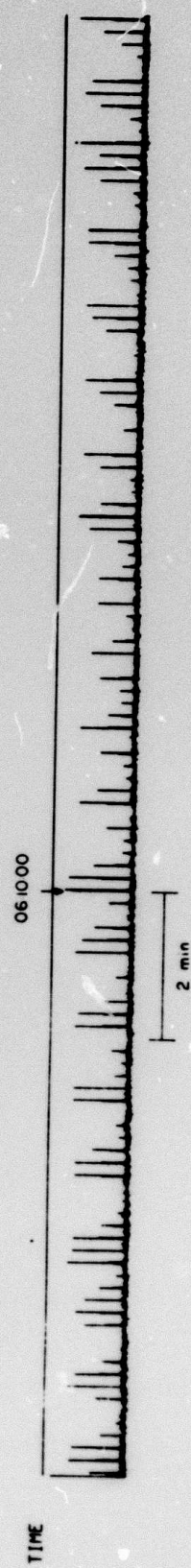
WWV



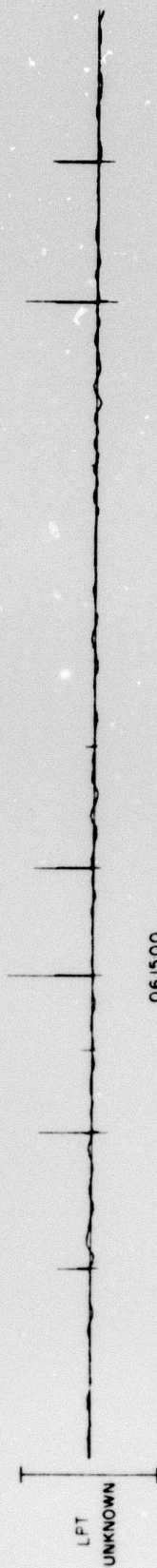
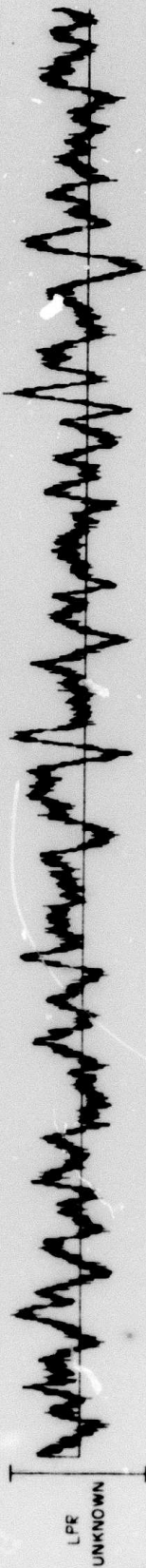
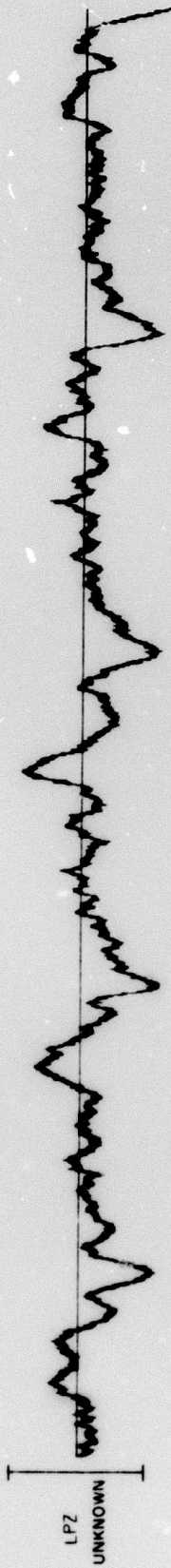
WH2YK 20 FEB 75



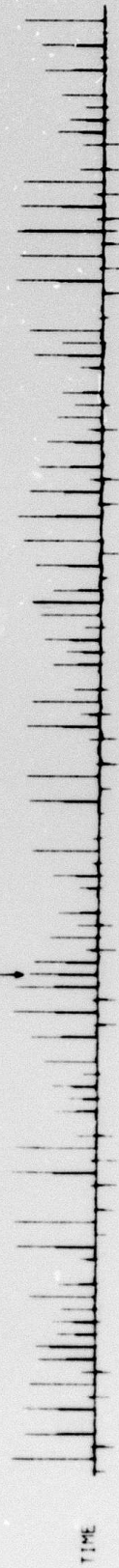
12.



HN-ME 20 FEB 75



061500

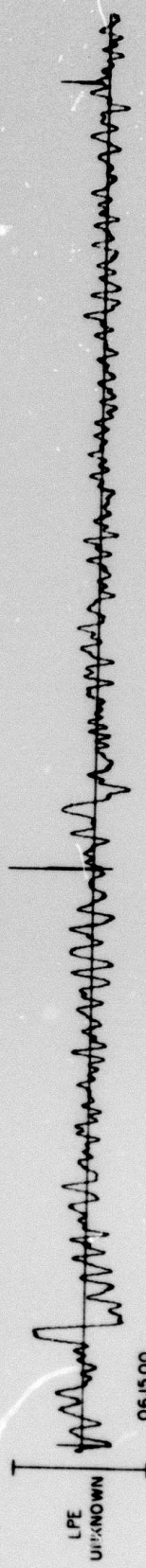
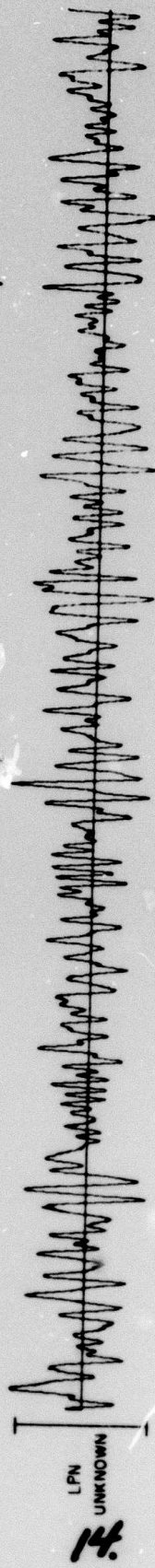
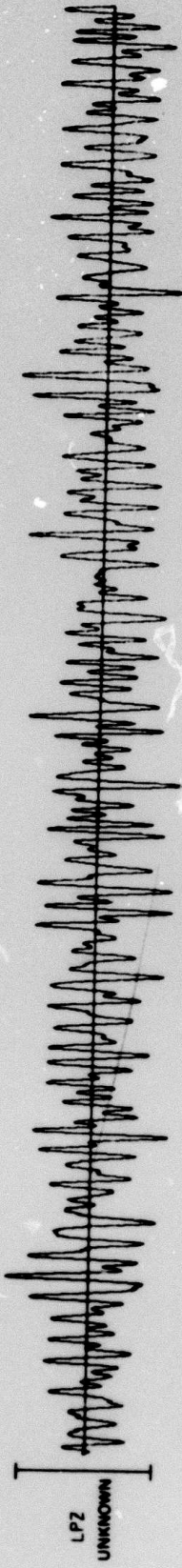


2 min

13.



CPSO 20 FEB 75



061500



TFSO LONG PERIOD 20 FEBRUARY 75

06 27 06 28 06 29 06 30 06 31 06 32 06 33 06 34 06 35 06 36 06 37 06 38 06 39 06 40

TCDMG  
ML

Z1LP 100 K

N1LP 50 K

E1LP 51 K

MS

Z1LL 8 K

N1LL 2 K

E1LL 2.5 K

WI

WWV

51