

ADA019262

SDCS-ER-75- 32

FG
①

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT ✓
Eastern Kazakh, 07 August 1975

J.R.Woolson, D.D.Solari, M.S.Dawkins, K.J.Hill, and R.J.Markle
Alexandria Laboratories ✓
Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

October 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



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 14 SDCS-ER-75-32	2. GOVT ACCESSION NO. (Cont)	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) 6 SPECIAL DATA COLLECTION SYSTEM (SDCS) ↓ Eastern Kazakh, 7 August 1975.	5. TYPE OF REPORT & PERIOD COVERED 9 Technical rept.		
7. AUTHOR(s) Woolson, J. R., Solari, D. D., Dawkins, M. S., Hill, K. J., and Markle, R. J.	8. CONTRACT OR GRANT NUMBER(s) 15 F08606-74-C-0013 WARPA Order - 2897		
9. PERFORMING ORGANIZATION NAME AND ADDRESS Teledyne Geotech 314 Montgomery Street Alexandria, Virginia 22314	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 16 VT/4703		
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia 22209	12. DATE 11 21 Oct 1975		12 19p.
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		
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) 10 J.R. / Woolson, D.D. / Solari, M.S. / Dawkins, M.S. / Hill, R.J. / Markle		ACCESSION for NTIS <input checked="" type="checkbox"/> White Section GPO <input type="checkbox"/> Bulk Section UNANNOUNCED <input type="checkbox"/> JUSTIFICATION	
18. SUPPLEMENTARY NOTES		BY DISTRIBUTION/AVAILABILITY CODES Dist. Avail. and/or SPECIAL A	
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)			

405601

RB

Eastern Kazakh, 7 August 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	03:56:47	49.1N	079.6E	5.0	N/A
Hagfors Array, Sweden	03:57:10	50 N	076 E	5.4	3.7

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

	03:57:00	50.0N	078.0E	5.0	N/A
--	----------	-------	--------	-----	-----

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR.

Analysis of SDCS and LASA long-period data failed to produce recognizable signals associated with this event. The LP system at RK-ON was inoperative due to maintenance following instrument relocation in a new vault. At HN-ME, the vertical instrument was inoperative. The horizontal instruments exhibited principally non-seismic motion. A similar effect occurred on the north-south channel at CPSO. The east-west instrument at CPSO was inoperative.

Horizontal long-period data at HN-ME and CPSO was not rotated to radial and transverse to this event location.

Long-period array data from ALPA and NORSAR was not recoverable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of NORSAR short-period plots. 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	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.

2

HYPOCENTER DETERMINATION

INPUT FOR EVENT 7 AUG 75
 03:57:00.0 49.000N 78.000E 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
NAC	04 04 18.7	-0.1	-0.1	38.0	312.8
WH2YK	04 07 50.8	0.1	0.0	66.5	17.0
RK-CN	04 09 06.5	-0.4	-0.3	79.3	354.6
HN-ME	04 09 10.1	0.4	0.5	79.8	336.7
LAC	04 09 30.1	0.2	0.2	83.7	2.9
FN-WV	04 09 59.6	0.3	0.3	89.7	342.6
CFC	04 10 17.0	-0.5	-0.6	93.6	346.7

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
03:56:48.0	49.616N	78.144E	-67. CALC	0.4	10	7
03:57:00.5	49.972N	78.010E	0. REST	0.4	3	7

CALC			REST		
4	.	2	4	.	2
1	.	0	1	.	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

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 0.92
 MAJOR 164.8KM. MINOR 40.7KM. AZ= 179 AREA= 21067 SQ.KM. REST

DATA SUMMARY

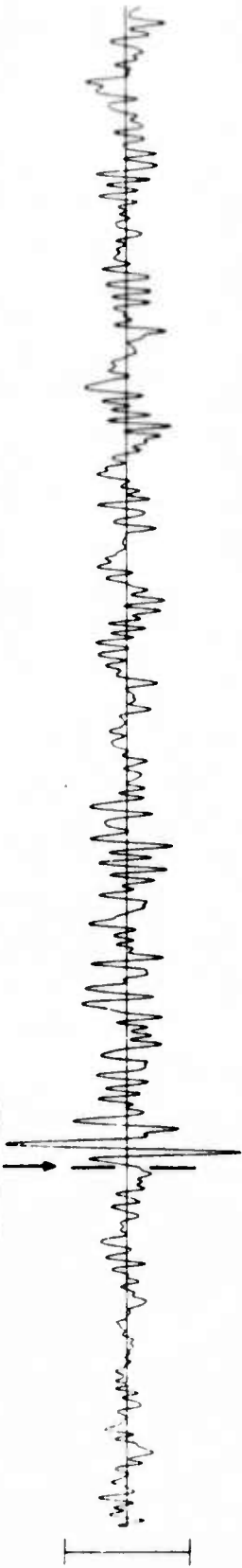
INPUT FOR EVENT 7 AUG 75
 03:57:00.0 49.000N 78.000E OKM.

STA.	PHASE	ARRIVAL		INST	FER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	M ^s		
NAC	EP	04 04	18.7	AF	0.5	28.	4.65			38.0
WH2YK	EP	04 07	50.8	SPZ	0.6	37.	5.27			66.5
RK-CN	EP	04 09	06.5	SPZ	0.4	33.	4.99			79.3
HN-ME	EP	04 09	10.1	SPZ	0.5	10.	4.42			79.8
LAC	EP	04 09	30.1	AG	0.7	44.	5.34			82.7
FN-WV	EP	04 09	59.6	SPZ	0.7	11.	4.74			89.7
CFC	EP	04 10	17.0	SPZ	0.8	24.	5.22			93.6

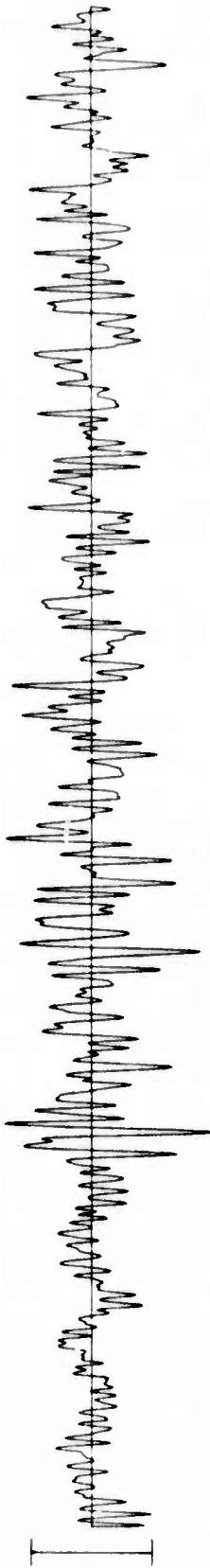
ORIGIN	LAT.	LCNG.	DEPTH (KM)	MAG	SDV	STA
03:56:48.0	49.616N	78.144E	0. CALC	4.93	0.35	7
03:57:00.5	49.972N	78.010E	0. REST	4.95	0.35	7

WH2YK 7 AUG 75

04:07:50.8



**SPZ
32.17 Mμ**



**SPR
17.99 Mμ**



**SPT
15.29 Mμ**

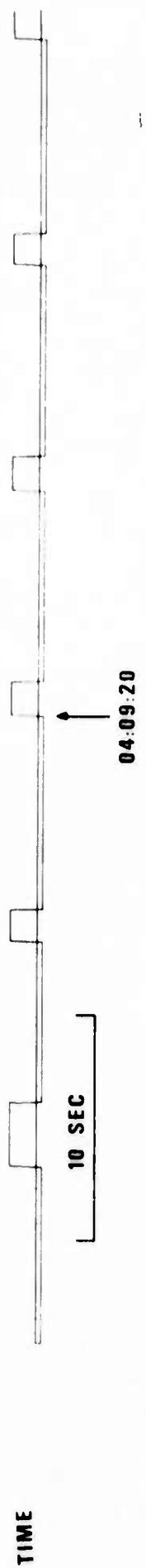
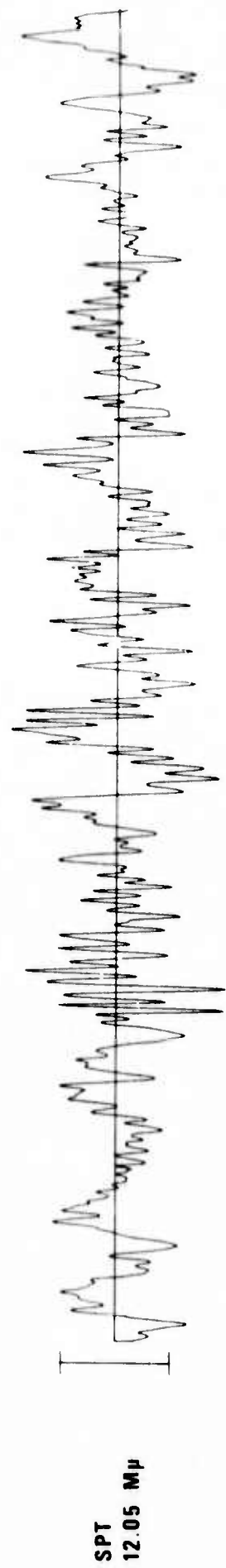
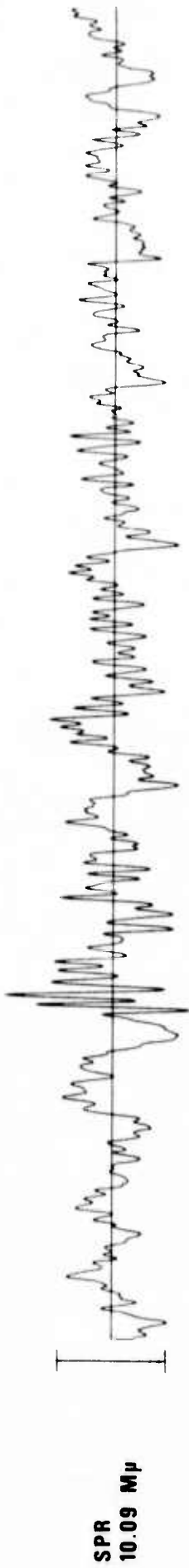


TIME

10 SEC

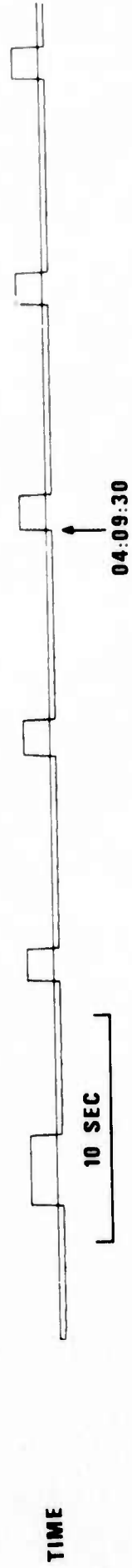
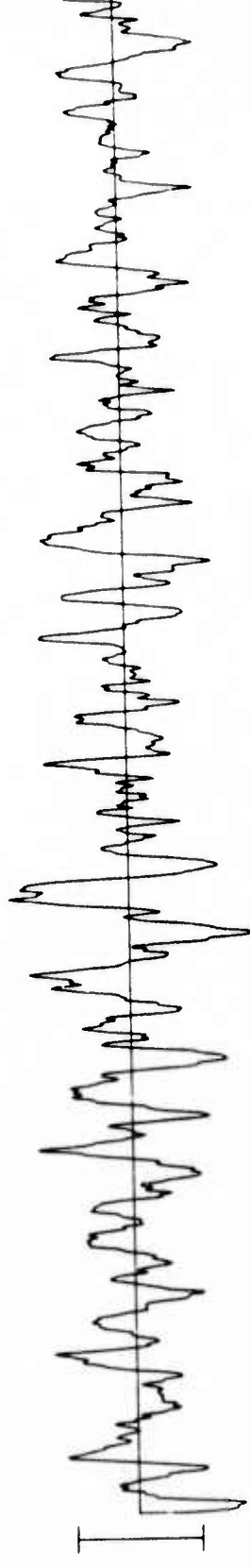
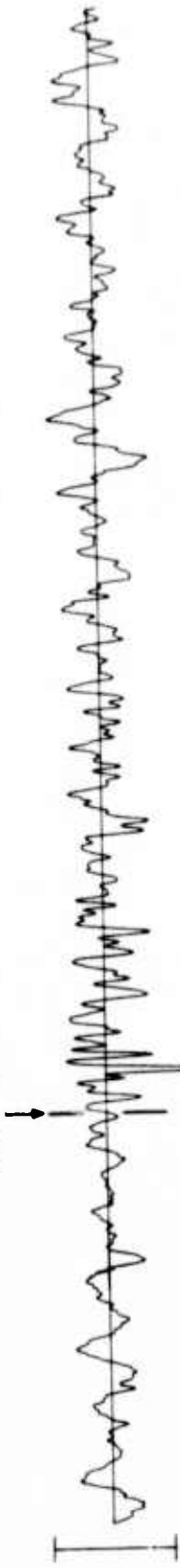
04:08:00

RK-ON 7 AUG 75



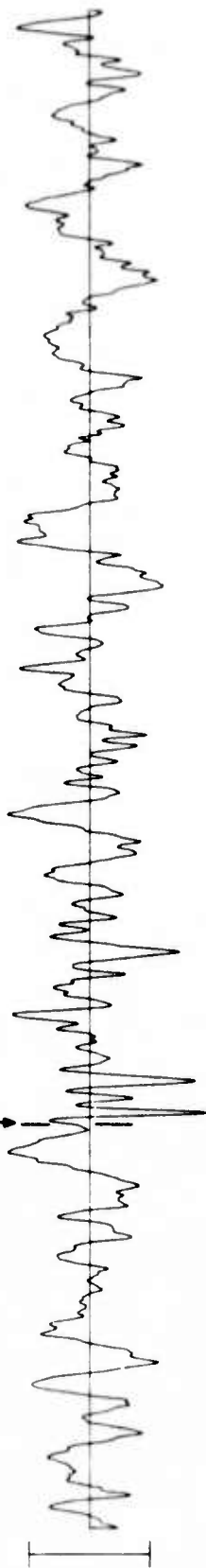
HN-ME 7 AUG 75

04:09:10.1

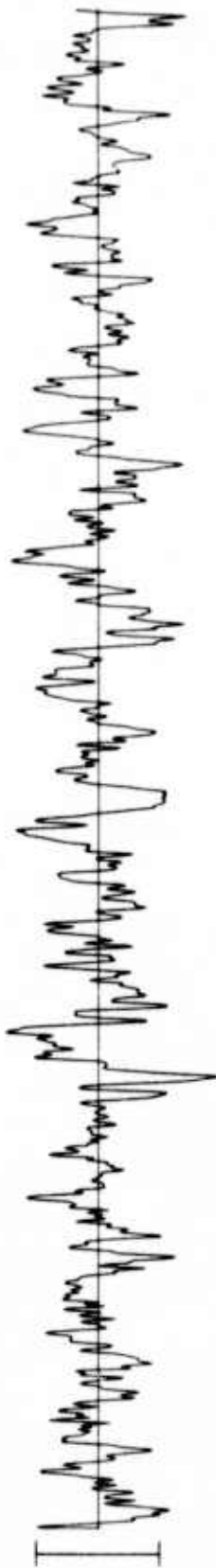


FN-WV 7 AUG 75

SPZ
10.42 Mp



SPR
8.33 Mp



SPT
11.00 Mp



TIME

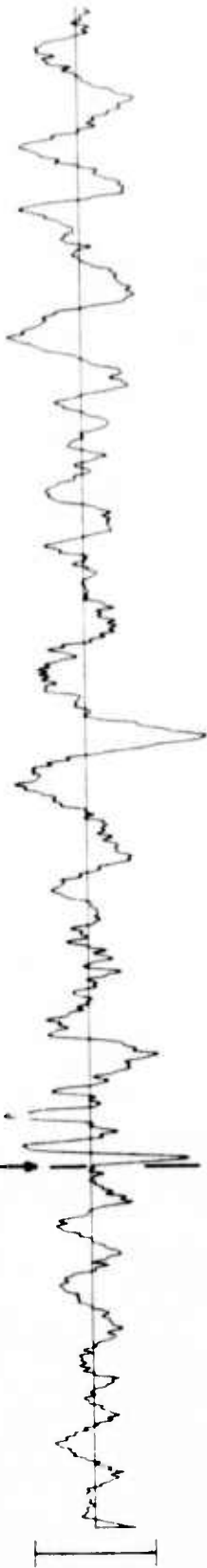


10 SEC

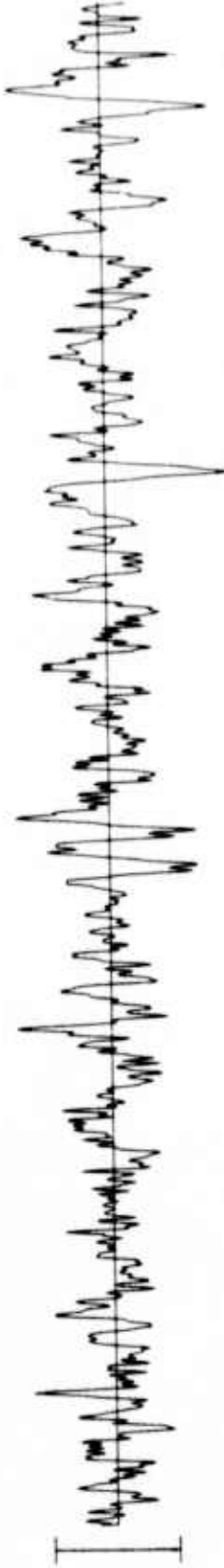
04:10:10

CP-S0 7 AUG 75

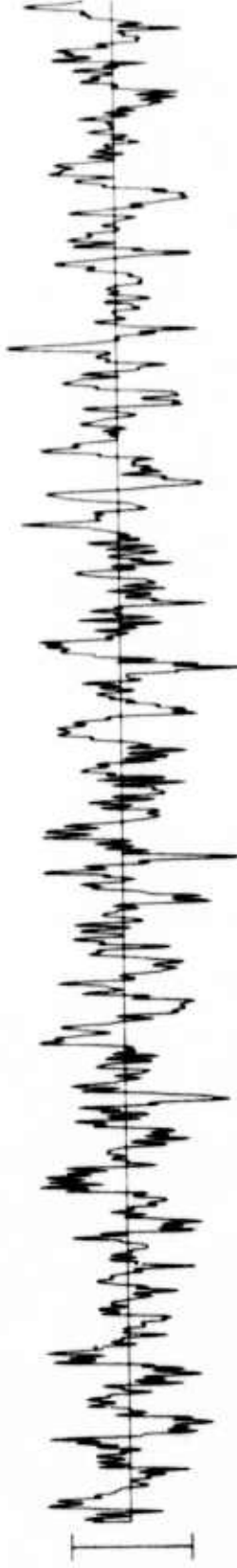
**SPZ
18.84 Mμ**



**SPR
4.42 Mμ**



**SPT
4.62 Mμ**



TIME



10 SEC

04:10:30

NORSAR EVENT FILE

1975 AUG 7

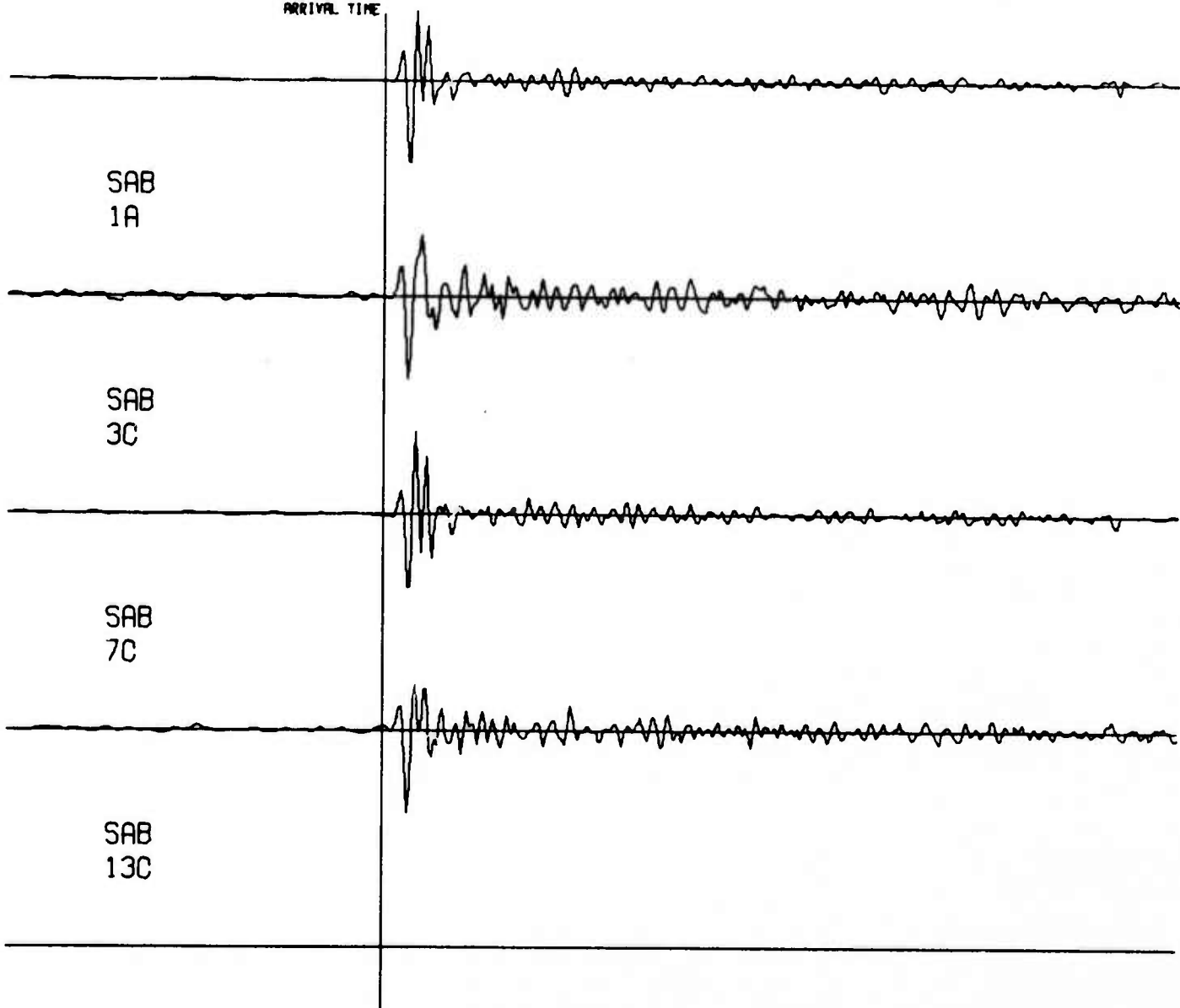
EPX NO. 94410 ARR. 04:04:18.3 49.1N 079.6E 5.0 MB -OKM

DIST = 83.7 AZI = 356.8 AMP = 11.8 PER = 0.4

—|—| = 5 SECONDS

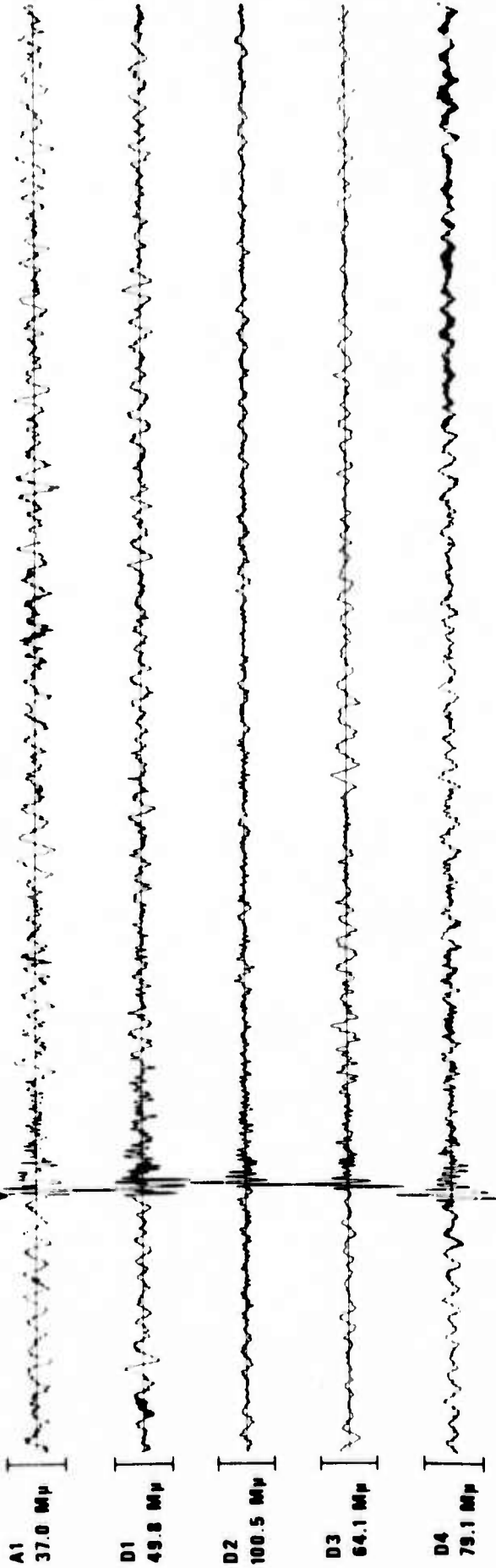
AB

ARRIVAL TIME



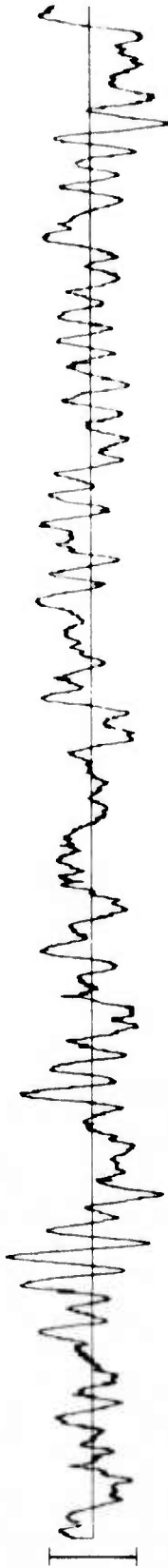
LASA INFINITE VELOCITY SUBARRAY SUMS 07 AUG 75

04:09:30.1

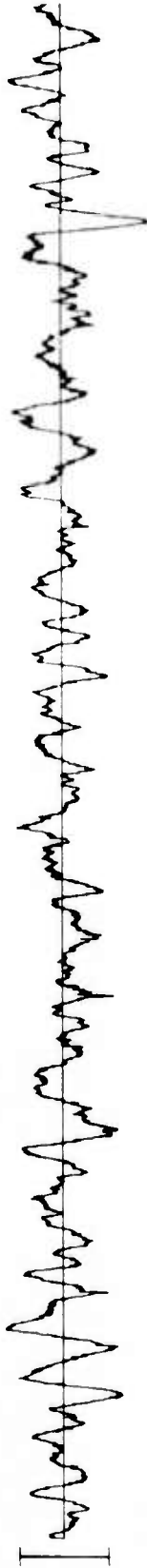


20 SEC

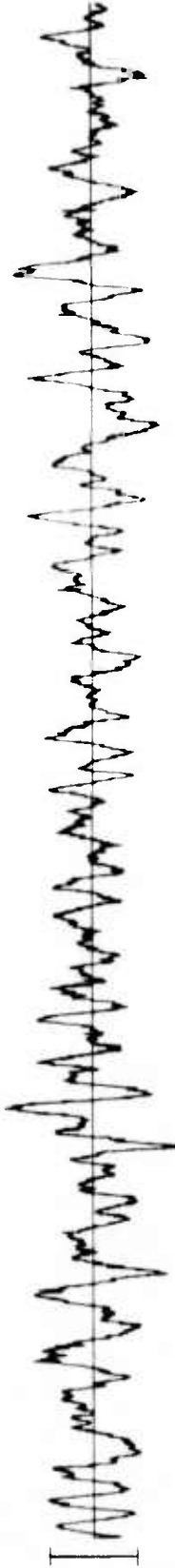
WH2YK 7 AUG 75



LPZ
89.44 MP



LPR
83.72 MP



LPT
83.83 MP

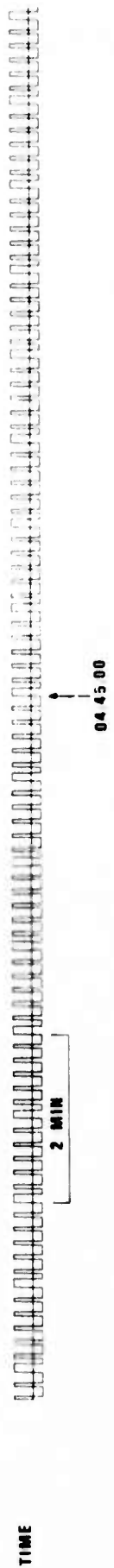
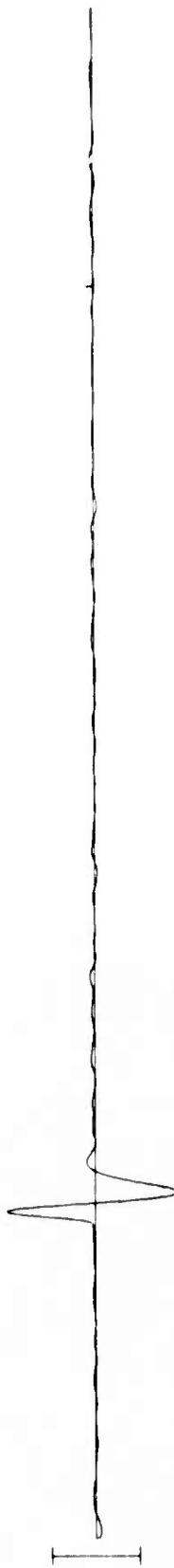
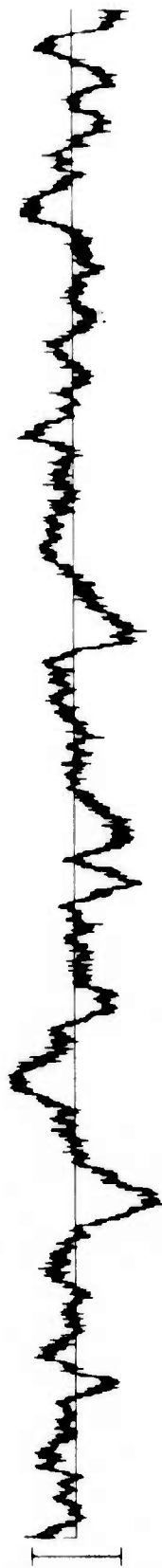


2 MIN

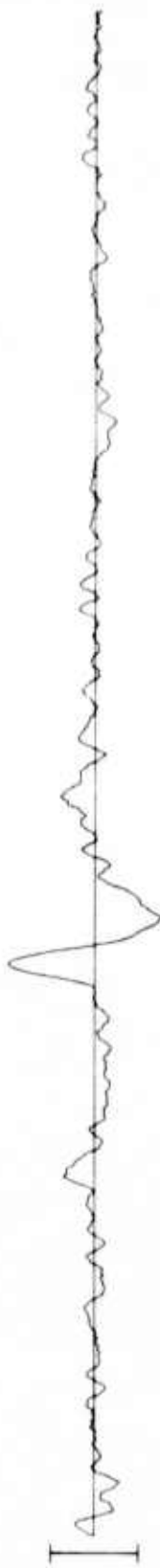
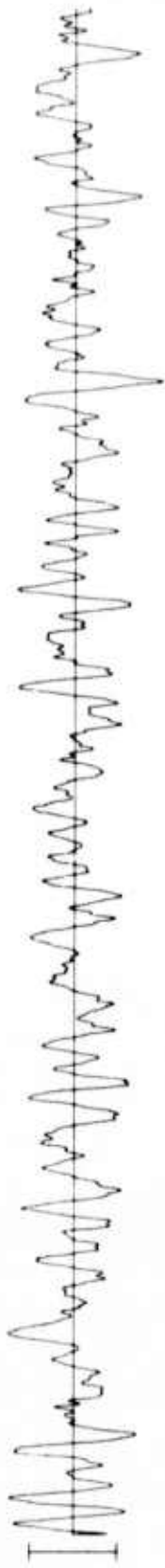
TIME

04:40:00

HN-ME 7 AUG 75



FN-WV 7 AUG 75



04:55:00

CP-S0 7 AUG 75

LPZ
90.62 MP



LPM
979.90 MP



LPE
21.00 MP



TIME



2 MIN

04:56:00

LASA C4 SUBARRAY 07 AUG 75

