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A STUDY OF SEISMICITY AND TECTONICS
IN NEW ENGLAND

Fourth Quarterly Report

MASTER

James W. Skehan, S.J.
Principal Investigator

Weston Observatory
of
Boston College
Chestnut Hill, Massachusetts
02193

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May 1, 1975 - July 31, 1975

PREPARED FOR THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) UNDER CONTRACT
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During this reporting period the three former network stations in Maine were activated, Caribou (CBM), Milo (MIM), and East Machias (EMM), and a new station was installed at Hanover (HNH), New Hampshire.

Each of the Maine stations is a three-component, short-period installation consisting of two horizontal Portable Benioff seismometers, Geotech model 6102B and a vertical Portable Benioff seismometer, Geotech Model 4681B. The installation at Hanover, New Hampshire, is a single-component, vertical, short-period seismometer, Mark Products Model L4A.

All remote sites have identical solid state electronics packaged in a Bud Porta-cabinet approximately 9 x 12 x 12 inches. The front panel of each cabinet has been built into a card cage system which holds the circuit cards. Three circuit cards make up the card cage system of each electronic package. A Power Supply printed circuit card holds a DATEL BPM 12/200 power module which converts AC power to ± 12 VDC and is capable of delivering ± 200 ma DC. This current supply is sufficient for the operation of all the electronics in the system with power latitude for expansion. The amplifier printed circuit card holds three separate seismic amplifiers, one for each channel. Each amplifier has adjustable gain and bandwidth. The voltage control oscillator (VCO) card contains three separate VCO's, one per channel, and a mixer-driver circuit.

To insure ready access for routine equipment checks and maintenance, connectors and circuit test points are mounted on the front panel of the electronic package. In the design and construction of these packages, provision has been made for eventual installation of a remote calibration system and other capabilities as needed.

All site installations, data telemetry, recording and analysis capabilities required by item (a) 6. of the subject contract, Article A-I, "Research to be performed by Contractor", are now completed. This item states: "Reactivate the four previously occupied seismometer stations (CBM, MIM, EMM, BNH) and activate a new station at Portsmouth, N.H. according to Plan 1 of the Contractor's Proposal dated April 6, 1974. Arrange for the telemetry of signals from these stations to nearby TELPAK terminals and thence to Weston Observatory. Provide a capability for permanent recording and analysis of these data."

With the completion of this essentially basic phase of the contract, a brief description of network instrumentation operation seems appropriate.

Seismic signals detected by a site's seismometers are delivered to the electronic package where they are amplified, applied to the proper voltage controlled oscillator, converted to a varying frequency tone and conditioned for transmission by telephone lines to a data terminal board at Weston Observatory. These site terminals at Weston are wired to a 6 x 6 inch solid state printed circuit discriminator boards, each board is capable of handling the three-component signals of a site and delivers them to the recording equipment.

A Geotech Develocorder, model 4000, records all components of the network on 16 mm film. This unit photographically processes the film and within ten minutes of any recording displays approximately eighty seconds of record on a view screen, magnifying the original film image ten times.

Vertical components of the network also record on Geotech 3-pen Helicorders. These records permit quick, visual inspection of several hours of recording at a glance. If any significant event is observed, detailed readings can be made of all components of each site recording the event by using the Develocorder record. In this operation, the film transport of the unit is put in reverse mode and, while the Develocorder continues to record current activity, the film from the storage reel is run back through the projection stage to the desired event.

Although Item (a) 6. of subject contract referred to previously of "Research to be Performed by Contractor" is the basic contractual requirement on which other requirements depend, it was possible to accomplish much on these dependent items even as work progressed on the basic requirement of instrumentation. Computer programs were written for the various analytic requirements such as determination of epicentral locations, magnitudes, focal depths, and wave velocities. With the completion of each site installation, the network aperture enlargement increased data acquisition capabilities and provided more opportunities to test these programs and modify them as needed.

APPENDIX

Boston College, Weston Observatory, Weston, Massachusetts 02193
Graduate School of Arts and Sciences

Office of the Director
Telephone (617) 899-0950

SHORT PERIOD SEISMIC DATA
Weston Observatory - Boston College
James W. Skehan, S.J., Director
May 1 - 15, 1975

NEW ENGLAND SEISMICITY

Local Earthquakes:

*** May 1, 1975 ***

WES 1P 17:19:27.7 ???

BNH 1P 19:43.4 DW?

*** May 3, 1975 ***

WES 1P 17:50:20 Develocorder film not available.

BNH 1P 50:16 Develocorder film not available.

*** May 4, 1975 ***

WES No Energy

BNH 1P 09:45:14.3 CES

S 21.6

*** May 9, 1975 ***

BNH 1P 18:53:52.5 D??

*** May 12, 1975 ***

BNH eP 10:23:45 ???

*** May 13, 1975 ***

BNH eP 15:26:12 ???

Prepared by Dennis P. Kucinkas, Record Analyst.

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SHORT PERIOD SEISMIC DATA
Weston Observatory - Boston College
James W. Skehan, S.J., Director

May 1 - 15, 1975

NEW ENGLAND SEISMICITY

Quarry Blasts:

*** May 2, 1975 ***

WES 1P 15:37:45.5 ???
S 37:51.6

WES 1P 15:58:46.0 ???
S 58:49.5

WES 1P 16:38:31.2 DE?
S 38:38.0

FRM S? 38:35 Possibly crossfeed

*** May 5, 1975 ***

WES 1P 20:58:05 ???

*** May 6, 1975 ***

WES 1P 15:54:37.4 ?E?
S? 54:38.2

WES 1P 18:21:32.4 ?E?
S? 35.7

WES 1P 18:26:16.2 ???
S? 19.4

Quarry Blasts, Continued:

*** May 6, 1975, Continued ***

WES 1P 22:07:57.2 ???

S 08:18.1

BNH 1P 22:07:01.3 ???

07:26.0

*** May 9, 1975 ***

WES 1P 18:20:05.4 ???

S 08.1

BNH 1P 21:11:32.9 C??

S 12:01.8

*** May 13, 1975 ***

BNH 1P 21:27:13.8

S 20.9

*** May 14, 1975 ***

WES 1P 14:06:52.8 CE Nuclear Blast

06:51.1 CE Nuclear Blast

WES eP 16:33:54 ???

WES 1P 20:05:38.1 ???

S 41.2

WES 1P 20:13:31.9 D??

S 35.8

WES 1P 20:54:47.9 D?S

S 50.6

Prepared by Dennis P. Kucinskas, Record Analyst.

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SHORT PERIOD SEISMIC DATA
Weston Observatory - Boston College
James W. Skehan, S.J., Director

--- Teleseisms ---

*** May 10, 1975 ***

BNH 1P 14:39:37.9 C??
S 40:05

WES 1P 14:39:51.9 CEN

*** May 11, 1975 ***

BNH 1P 07:08:37.1 C??

WES 1P 07:08:49.5

*** May 13, 1975 ***

BNH eP 21:37:54 ???

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SHORT PERIOD SEISMIC DATA

May 16-May 31, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Local Earthquakes:

5/19/75	FLR	iP	17:20:06.2	
		eS	:12	
	WES	iP	17:20:06.5	C
		(e)S	:13	
5/20/75	WES	iP	19:46:03.15	D
		iS	:07.6	
5/27/75	BNH	eP	08:52:38	
5/29/75	FLR	iP	16:05:01.0	C
		iS	:03.2	
	WES	iP	16:05:13.1	
		iS	:22.6	

Prepared by Jeffry Shralow, Record Analyst

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SHORT PERIOD SEISMIC DATA

May 16-May 31, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Quarry Blasts:

5/16/75	WES	iP	16:16:49.5
5/19/75	BNH	iP	22:45:44.1
		S?	:46:08.7
	WES	S?	:47:05.3
5/20/75	FLR	iP	16:29:59.3
		eS	:30:15
	WES	iP	16:30:02.0
		eS	:30:21
	BNH	eP	16:30:37
		eS	:31:18
5/21/75	WES	iP	12:35:55.5
5/22/75	BNH	eP	18:00:28
	BNH	eP	19:45:17
5/26/75	BNH	eP	15:23:15
	BNH	eP	15:55:30
5/27/75	BNH	iP	13:30:29.6
	BNH	iP	16:58:06.2
	BNH	eP	19:48:51

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Quarry Blasts, continued:

5/28/75	BNH	eP	15:53:48	
	BNH	eP	16:05:16	
	BNH	eP	19:45:25	
	BNH	1P	20:04:22.3	C
5/29/75	BNH	1P	16:02:01.0	CES
	BNH	eP	18:54:17	
5/30/75	WES	eP	15:36:19	
	WES	1P	15:55:57.6	CN
	WES	eP	16:28:56	
	WES	eP	17:26:41	
	WES	1P	17:59:17.9	
5/31/75	BNH	eP	18:10:58	
	WES	eP	19:09:40	
	BNH	eP	19:47:00	
	BNH	eP	19:58:55	

Prepared by Jeffry Shrallow, Record Analyst

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SHORT PERIOD SEISMIC DATA

May 16-May 30, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Suspected Local Earthquakes:

5/24/75	FLR	eP	02:18:09
	WES	eP	:35
	BNH	eP	18:40:24
	WES	eP	19:39:00
	FLR	eP	:20
5/27/75	WES	eP	16:40:37
5/29/75	BNH	eP	23:15:59

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SHORT PERIOD SEISMIC DATA

May 16-May 31, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Suspected Quarry Blasts:

5/21/75	WES	eP?	17:11:19	
	BNH	eP?	:45	
5/23/75	WES	eP	15:05:07	
	WES	eP	15:57:19	
	WES	eP	16:09:25	
	BNH	eP?	16:10:49	
	BNH	1P	19:44:39.5	
	BNH	eP?	19:48:13	
	BNH	1P?	21:33:16.2	
	BNH	eP?	21:53:15	
5/24/75	BNH	1P	21:22:11.8	
5/27/75	WES	1P	18:10:38.0	CWS
5/28/75	WES	eP	15:40:31	
	WES	eP	15:57:12	
	WES	eP	16:24:33	
5/29/75	BNH	eP	19:45:38	
5/30/75	BNH	eP	16:03:09	
	BNH	eP	19:45:50	

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SHORT PERIOD SEISMIC DATA

May 16-May 30, 1975

Weston Observatory - Boston College

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Teleseisms:

5/16/75	BNH	1P	08:07:32.5	DWN
5/18/75	BNH	1P	15:51:18.4	DWN
	WES	1P	15:51:31.7	C
5/20/75	BNH	eP	21:52:41	
	WES	eP	:48	
5/21/75	BNH	eP	18:48:26	
5/22/75	FLR	eP	00:03:38	
	WES	eP	:46	
	BNH	eP	:04:04	
	BNH	eP	15:11:31	
5/25/75	BNH	1P	19:13:14.5	C
	WES	1P	:26.5	C
5/26/75	BNH	1P	09:19:33.6	
	WES	1P	:36.3	CES
	FLR	1P	:36.9	
	BNH	1P	20:27:17.9	
	WES	1P	:20.9	CES
	FLR	1P	:21.1	
5/27/75	BNH	eP?	06:53:51	
	WES	eP?	:54:10	
5/29/75	BNH	eP	21:20:17	
	WES	eP	:21:46	
	FLR	eP	:22:27	

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FORMAT FOR NEW ENGLAND

SEISMICITY

June, 1975

Column 1 - Date

Column 2 - Recording Station

Column 3 - Phase recorded (eP, iP)

Column 4 - Arrival Time (Hr:min:sec) UTC or UCT

Column 5 - Initial movement recorded

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SHORT PERIOD SEISMIC DATA

June 1-June 15, 1975

Weston Observatory - Boston College

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Local Earthquakes:

6/3/75	WES	iP	21:04:34.4	CEN
		iS	:37.0	
	BNH	eP	21:05:11	
6/9/75	WES	iP	16:12:44.05	DN
	BNH	iP	18:39:52.7	DNW
	WES	iP	:40:09.8	C
	FLR	iP	:19.1	D

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SHORT PERIOD SEISMIC DATA

June 1 - June 15, 1975

Weston Observatory - Boston College

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Quarry Blasts:

6/2/75	WES	iP	18:31:32.8	CES
	BNH	eP	19:46:47	
6/3/75	FLR	iP	16:14:31.1	C
		iS	:34.0	
	WES	eP	16:14:42	
	BNH	iP	17:02:45.4	C
	WES	iP	18:15:11.6	
	BNH	eP	18:32:59	
		eS	33:27	
	WES	iP	19:39:50.6	CE
		eS	:54	
	BNH	iP	19:47:34.3	CS
		eS	:52	
	BNH	iP	21:00:28.8	CE
		iS	:45.9	
	BNH	iP	21:20:00	
	BNH	iP	21:50:24.4	
		iS	:32.5	
6/4/75	BNH	e(P)	15:57:48	
	WES	e(P)	16:14:49	
	BNH	e(P)	17:02:25	
	BNH	e(P)	18:17:33	
	BNH	e(P)	19:47:08	

Quarry Blasts, cont'd.

6/5/75	BNH	eP	19:35:01	
	BNH	eP	19:44:57	
	BNH	eP	21:46:56	
	BNH	e(P)	22:27:20	
6/6/75	WES	iP	19:54:05.7	
6/10/75	BNH	eP	16:09:17	
		eS	:49	
6/11/75	WES	iP	14:59:36.2	C
	FLR	iP	16:38:24.7	
		iS	:27.0	
	BNH	iP	16:52:24.9	
		iS	:48.7	
	BNH	iP	19:45:51.3	
		iS	:46:09.4	
6/12/75	BNH	eP	14:01:21	
	WES	iP	17:02:14.1	
	BNH	eP	19:44:43	
		eS	:45:02	
6/13/75	BNH	e(P)	14:48:05	
	BNH	eP	16:04:10	
		eS	:35	
	WES	eP	18:02:08.6	
	BNH	iP	19:44:44.8	
		iS	:45:03.4	
	WES	iP	19:45:13.2	C
		eS	:16	
	BNH	e(P)	19:57:01	
	BNH	iP	21:57:00.6	
		eS	:25	
	BNH	iP	22:01:34.7	
		eS	:43

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SHORT PERIOD SEISMIC DATA

June 1 -June 15, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Suspected Local Earthquakes:

6/4/75	WES	e(P)	15:01:17	
	WES	e(P)	20:26:58	
	BNH	e(P)	20:27:14	
6/5/75	BNH	iP	21:48:48.3	DWN
6/8/75	BNH	iP	03:39:22.6	D

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SHORT PERIOD SEISMIC DATA

June 1 -June 15, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Suspected Quarry Blasts:

6/2/75	WES	eP	16:19:46
	WES	eP	19:13:57
	BNH	eP	21:29:43
	BNH	eP	23:14:17
6/3/75	BNH	eP	14:53:04
	WES	eP	18:09:20
	WES	eP	18:10:11
6/6/75	BNH	eP	19:44:50
	FLR	eP	20:04:33
6/9/75	BNH	e(P)	12:45:00
	BNH	eP	15:59:13
	BNH	eP	18:54:43
	BNH	eP	19:44:59
	BNH	eP	21:33:10
	BNH	eP	22:20:55
6/11/75	WES	iP	15:40:18.9
	BNH	eP	15:58:51
		eS	:59:15
	FLR	iP	16:26:55.6
	WES	iP	21:42:48.6
		iS	:52.6
	BNH	iP	22:42:50.7
		iS	:43:07.5
6/14/75	BNH	iP	19:51:31.1
		iS	:48.9

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SHORT PERIOD SEISMIC DATA

June 1 - June 15, 1975

Weston Observatory - Boston College

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Teleseism:

6/2/75	WES	e(P)	19:54:43	
6/3/75	WES	iP	14:26:52.3	C Nuclear Blast
	BNH	iP	14:26:50.6	C Nuclear Blast
	BNH	iP	14:46:48.5	C Nuclear Blast
	WES	eP	14:46:50	Nuclear Blast
	WES	e(P)	18:27:08	Nuclear Blast
6/4/75	WES	e(P)	02:38:06	
6/5/75	WES	iP	03:42:18.2	CN
	WES	iP	20:39:13.7	DWS
	BNH	iP	20:39:29.3	DS
6/7/75	BNH	iP	08:53:45.2	DW
6/10/75	WES	iP	14:00:11.9	D
	BNH	iP	14:50:27.0	D
	BNH	e(P)	15:11:36	
	WES	iP	:46.5	D
	BNH	iP	15:33:57.1	D
	WES	iP	:34:06.0	C
6/13/75	WES	e(P)	06:29:12	C
	BNH	eP	18:20:51	
	WES	iP	:21:02.5	C

Teleseisms, cont'd.

6/14/75	BNH	1P	10:52:03.1	CN
	BNH	1P	18:50:38.0	D
	WES	1P	:49.9	D
	BNH	1P	19:02:16.6	DN
	BNH	1P	20:57:55.2	CWS
	WES	1P	:58:12.1	C
	BNH	1P	23:49:44.6	CES
	WES	1P	:53.8	
6/15/75	BNH	1P	00:32:08.4	CES
	WES	1P	:20.0	CS

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SHORT PERIOD SEISMIC DATA

June 16 - 30, 1975

Weston Observatory-Boston College

James W. Skehan, S.J., Director

Teleseisms:

6/15/75	BNH	iP	00:32:08.4	CES
	WES	iP	00:32:20.0	CS
	BNH	eP	02:21:52	
	WES	eP	02:22:03	
6/16/75	BNH	eP	04:33:27	
	WES	eP	:33	
	FLR	eP	:36	
6/17/75	WES	iP	05:06:20.4	DES
		eS	:10:42	
		eT	:29:20	
	BNH	iP	05:06:41.2	
		eT	:30:44	
6/19/75	BNH	iP	13:06:49.1	CEN (Nuclear Test, Nevada)
	WES	iP	13:06:51.8	CE (Nuclear Test, Nevada)
	FLR	eP	13:06:54	(Nuclear Test, Nevada)

Teleseisms: (continued)

6/22/75	BNH	iP	02:37:41.3	C
	WES	eP	02:37:53	
	BNH	iP	04:36:43.3	C
	HNH	iP	04:36:45.6	
	WES	iP	04:36:54.1	C
	BNH	iP	22:56:51.4	C
	WES	eP	22:57:01	
6/25/75	BNH	eP	19:28:11	
6/26/75	WES	eP	08:09:43	
	BNH	eP	12:36:50	(Nuclear Test, Nevada)
	WES	iP	12:36:50.9	C (Nuclear Test, Nevada)
	BNH	eP	13:19:38	
6/29/75	BNH	e(P)	10:50:05	
	WES	iP	10:50:14.4	
		iS	:59:57.3	
6/30/75	WES	e(P)	19:01:20	

Prepared by Record Analysts Michael Shields and Jeffry Shallow,
under the supervision of Seismologist Dr. Jeffrey Johnson.

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SHORT PERIOD SEISMIC DATA

June 16 - 30, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Suspected Local Earthquakes:

6/17/75	WES	iP eS	16:48:42.4 :55	D
6/18/75	BNH	iP eS	14:09:13.7 :44	DN
6/19/75	WES	iP iS	21:57:31.1 :35.7	CN
6/20/75	BNH	e(P)	01:23:23	
6/21/75	BNH	e(P)	00:30:10	
6/27/75	BNH	iP iS	00:00:05.0 00:00:32.5	D
	MIM	e(P)	00:00:45	

Prepared by Record Analysts Michael Shields and Jeffry Shrallow,
under the supervision of Seismologist Dr. Jeffrey Johnson.

Quarry Blasts: (continued)

6/26/75			
(continued)	MIM	eP	21:52:27
	BNH	eP	22:42:17
6/27/75	BNH	e(P)	16:16:20
	FLR	e(P)	16:16:39
	BNH	e(P)	19:45:00
	WES	e(P)	20:04:42
6/29/75	BNH	e(P)	13:37:42
	WES	eP	14:58:41
	BNH	e(P)	19:44:00
	WES	eP	19:56:59

Prepared by Record Analysts Michael Shields and Jeffry Shrallow,
under the supervision of Seismologist Dr. Jeffrey Johnson.

Boston College, Weston Observatory, Weston, Massachusetts 02193
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Office of the Director
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SHORT PERIOD SEISMIC DATA

June 16 - 30, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Quarry Blasts:

6/16/75	WES	iP	15:23:50.6	C
	BNH	eP	15:59:41	
	BNH	eP	17:03:39	
	BNH	iP	17:11:05.5	C
		eS	:14	
	WES	iP	17:28:36.0	C
	WES	iP	18:11:55.7	
	BNH	eP	18:39:55	
	BNH	eP	19:47:40	
	WES	iP	19:52:51.7	C
	WES	eP	20:40:30	
6/17/75	BNH	eP	15:53:36	
		eS	:54:00	
	BNH	iP	16:53:40.5	C
		iS	:54:04.1	
	WES	iP	19:43:42.3	
		eS	:45	
	BNH	eP	19:45:20	
	BNH	e(P)	20:52:40	

Quarry Blasts; (continued)

6/18/75	FLR	iP	14:35:48.5	C
	WES	iP eS	14:35:58.8 :36:13	C
	BNH	iP iS	16:01:44.4 :02:07.4	C
	WES	iP	16:21:33.1	C
	WES	eP	16:56:24.6	
	FLR	iP	17:49:04.1	C
	WES	iP	17:49:14.0	
	WES	eP	18:08:32	
	WES	e(L)	18:56:30	
	BNH	eP eS	19:45:10 19:45:38	
	FLR	iP	19:55:28.0	C
	WES		19:55:38.0	C
	BNH	eP	21:07:29	
	BNH	iP eS	21:10:43.4 :11:10	CE
	WES	eP iS	21:10:50.2 :11:23.0	
	FLR	eP iS	21:11:04 :43.4	
6/19/75	FLR	iP	14:02:16.0	C
	WES	iP eS	14:02:25.8 :41	C
	WES	iP iS	14:30:09.8 :13.0	C
	WES	iP	15:40:03.4	C
	BNH	eP	19:44:23	
	HNH	iP	21:10:05.4	C

Quarry Blasts: (continued)

6/20/75	BNH	eP	19:44:35	
		iS	:52.7	
6/21/75	BNH	iP	14:18:58.4	C
		iS	:19:21.7	
	BNH	eP	19:42:44	
		eS	:43:03	
6/23/75	WES	iP	13:29:42.8	C
		iS	:47.1	
	WES	iP	16:13:10.6	
		iS	:14.7	
	WES	iP	16:35:33.7	C
		eS	:39	
	WES	iP	16:45:39.4	
		eS	:44	
	WES	eP	18:02:42	
	WES	iP	19:32:43.1	CS
		eS	:47	
	BNH	iP	19:45:26.9	C
		iS	:44.1	
	WES	iP	20:01:48.9	
	WES	iP	20:10:42.9	
		iS?	:43.5	
6/24/75	WES	e(P)	15:36:41	
	WES	e(P)	16:00:06	
	WES	e(P)	18:07:14	
6/25/75	WES	eP	16:17:30	
	BNH	e(P)	19:44:45	
6/26/75	WES	eP	15:24:52	
	WES	eP	15:43:48	
	BNH	eP	15:55:14	
	BNH	e(P)	16:02:58	
	BNH	e(P)	17:02:09	
	BNH	e(P)	19:43:36

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SHORT PERIOD SEISMIC DATA

June 16 - 30, 1975

Weston Observatory-Boston College

James W. Skehan, S.J., Director

Suspected Quarry Blasts:

6/16/75	WES	iP	15:34:22.7
	BNH	e(L)	15:56:09
6/17/75	WES	e(L)	15:30:53
	BNH	eP	15:31:33
	BNH	e(P)	16:43:55
	WES	iP	19:49:29.2
	BNH	e(L)	20:51:23
	BNH	e(L)	21:04:00
	BNH	e(P)	21:29:50
	BNH	e(L)	21:55:33
6/18/75	WES	e(P)	14:56:26
	WES	iP	15:58:13.7
6/19/75	WES	e(L)	19:36:53
	BNH	e(P)	21:33:23
	HNH	e(P)	21:33:28
6/20/75	BNH	eP	16:34:50
		eS	:35:03
	BNH	eP	17:12:09

Suspected Quarry Blasts: (continued)

6/20/75 (continued)	WES	eP	17:54:02	
		eS	:07	
6/23/75	WES	eP	13:58:59	
	WES	eP	15:44:11	
	WES	eP	18:42:38	
	WES	eP	19:12:16	
	FLR	iP	19:32:51.0	C
		iS	:54.0	
6/25/75	BNH	e(P)	21:10:36	
6/26/75	WES	eP	15:15:15	
	WES	eP	15:29:01	
	WES	eP	15:33:32	
	MIM	eP	19:56:05	
	MIM	e(P)	20:37:23	

Prepared by Record Analysts Michael Shields and Jeffry Shrallow,
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FORMAT FOR NEW ENGLAND
SEISMICITY
July 1975

- Column 1 - Date.
- Column 2 - Recording Station.
- Column 3 - Phase recorded - iP, eP, e(P).
- Column 4 - Arrival time (Hr:min:sec) UTC or UCT.
- Column 5 - Initial movement recorded.

Prepared By:

Record Analysts: Jeffry Shrallow
Michael Shields

Seismologist: Mr. Jeffrey Johnson

Boston College, Weston Observatory, Weston, Massachusetts 02193
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-1-

SHORT PERIOD SEISMIC DATA

July 1 - July 31, 1975

Weston Observatory - Boston College

James W. Skehan, S.J., Director

Local Earthquakes:

7/2/75	WES	iP	05:31:41.6
		iS	43.9
	FLR	eP	05:31:48.2
7/22/75	MIM	iP	06:17:39.2
	BNH	iP	06:18:08.1
		eS	:18:28.
7/26/75	WES	iP	11:26:48.2
		eS	:56.1
	EMM	e(P)	14:55:42.
		e(S)	:56:00.
	MIM	e(S)	14:56:22.
7/28/75	MIM	e(P)	04:16:54.
7/29/75	BNH	eP	15:55:20.1
		eS	:55:41.8
	MIM	e(P)	15:55:34.
		e(S)	:56:08.
	EMM	e(P)	15:55:49.
		e(S)	:56:13.
7/30/75	EMM	eP	14:07:13.4
		e(S)	:07:28.
	BNH	eP	14:07:43.5
		eS	:08:25.2
	MIM	e(S)	14:07:59.

Quarry Blasts:

7/1/75	WES	e(P)	17:51:57.	
7/2/75	FLR	iP	16:26:42.1	C
		iS	:44.3	
	WES	iP	16:26:54.9	C
		iS	:27:03.6	
	BNH	iP	19:46:13.9	
		e(S)	:32.	

Quarry Blasts: (continued)

7/3/75	WES	iP	15:05:02.1	C
	BNH	e(S)	16:04:38.	
	WES	iP	16:05:05.5	C
	BNH	e(P)	17:04:55.	
	BNH	e(P)	17:08:19.	
	HNH	e(P)	17:23:48.	
	BNH	e(P)	17:24:02.	
	BNH	e(P)	17:52:30	
	BNH	iP	18:20:16.2	D
		iS	:38.9	
	BNH	e(P)	18:53:59.	
	BNH	iP	19:43:45.8	C
	MIM	e(P)	19:44:00.	
	BNH	iP	19:59:24.6	
	BNH	e(P)	20:09:19.	
	BNH	eP	21:28:33.6	
	BNH	iP	21:46:41.3	D
	BNH	e(L)	21:48:46.	
	BNH	e(P)	21:57:12.	
	7/4/75	BNH	e(P)	16:00:18.
BNH		e(P)	16:21:30.	
BNH		e(P)	16:43:50.	
BNH		e(P)	19:42:38.	
7/5/75	BNH	eP	19:40:34.	
		eS	:51.	
7/7/75	WES	iP	15:05:39.3	
	BNH	iP	17:43:44.3	
		iS	:44:07.3	
	BNH	iP	22:12:08.5	
		eS	:20.	
7/8/75	MIM	iP	15:01:54.7	
	WES	iP	17:37:04.5	
	FLR	e(P)	17:37:16.	
	WES	iP	19:14:56.1	
	BNH	e(P)	19:43:26.5	
7/9/75	WES	iP	18:26:14.9	
		eS	:20.	
	FLR	eS	18:26:20.	
7/10/75	WES	iP	15:49:11.4	
	WES	eP	15:52:19.	
	WES	iP	16:14:19.4	
		iS	:25.8	
	BNH	e(P)	19:44:00.	
	WES	iP	19:44:24.0	
		iS	:28.8	

Quarry Blasts: (continued)

7/11/75	BNH	eP	13:03:01	
	WES	iP	15:20:52.0	C
	BNH	iP	15:26:03.1	C
		eS	:18.1	
	WES	iP	15:34:28.7	C
		iS	:33.0	
	BNH	eP	16:31:29.3	
		eS	:52.3	
	BNH	eP	19:42:27.9	
	MIM	e(P)	19:42:32.4	
WES	iP	19:42:39.3		
7/12/75	BNH	iP	19:43:41.4	D
		iS	:59.5	
	MIM	eP	19:43:55.8	
7/14/75	BNH	iP	13:06:16.5	C
	WES	iP	15:14:35.0	C
		eS	:38.2	
	BNH	iP	15:36:59.5	C
	BNH	iP	16:05:00.9	C
		eS	:12.9	
	WES	iP	16:41:56.8	C
		iS	:42:00.7	
	MIM	iP	17:24:02.7	
		eS	:16.9	
7/15/75	WES	iP	16:08:42.5	C
		eS	:52.9	
	WES	iP	16:15:35.1	C
		iS	:39.4	
	WES	iP	17:31:24.2	C
		iS	:27.2	
	WES	iP	17:48:44.2	C
			:48.9	
	MIM	eP	17:58:15.6	
		iS	:21.6	
	WES	iP	18:32:35.8	C
		iS	:39.8	
	BNH	iP	20:12:46.8	C
	BNH	iP	21:32:10.5	C
	iS	:18.3		
7/16/75	WES	iP	15:37:55.2	C
		iS	:58.0	
	WES	iP	16:04:33.8	C
		eS	:38.9	
	FLR	eP	16:04:34.1	
		eS	:39.2	
	WES	iP	16:24:05.4	
		iS	:08.4	
	WES	iP	18:10:34.1	
		e(S)	:39.	

Quarry Blasts: (continued)

7/16/75 (continued)	WES	eP	18:18:26.8	C
		eS	:28.9	
	WES	iP	18:18:34.1	
		eS	:45.9	
	BNH	iP	20:34:04.4	C
		iS	:12.0	
	BNH	iP	20:49:47.5	C
		eS	:50:13.8	
	BNH	e(P)	19:52:58.	
		iS	:53:06.2	
7/17/75	WES	iP	15:10:06.9	C
		eS	:10.0	
	WES	iP	15:14:45.5	
		iS	:48.7	
	WES	iP	15:18:00.8	
		eS	:04.0	
	WES	iP	15:23:53.3	C
		eS	:56.4	
	WES	iP	16:08:36.9	C
			:42.7	
	BNH	iP	16:11:57.8	
		iS	:12:26.0	
	WES	iP	16:30:13.7	C
		iS	:27.9	
	WES	iP	16:38:06.3	C
	WES	eP	17:01:18.8	
		iS	:21.9	
	WES	iP	18:29:18.9	
		iS	:32.1	
	WES	iP	18:45:27.0	C
		eS	:31.7	
	BNH	e(P)	19:46:57.	
		iS	:20.8	
	BNH	iP	20:55:37.1	C
		iS	:45.0	
	BNH	iP	21:57:19.6	C
		eS	:42.7	
	7/18/75	BNH	iP	00:25:29.9
		iS	:53.3	
BNH		e(P)	15:54:53.	
		eS	:57.7	
BNH		e(P)	20:38:40.	
7/21/75	BNH	eP	16:11:04	
		iS	:28.5	
	WES	iP	19:49:12.2	
		iS	:15.3	
	WES	iP	21:24:31.5	

Quarry Blasts: (continued)

7/22/75	WES	iP	13:15:54.2
		iS	:59.2
	WES	iP	17:27:59.2
		iS	:28:02.6
	WES	iP	17:30:24.6
		iS	:28.0
	WES	e(P)	17:53:45.
		eS	:47.3
	BNH	iP	19:45:43.1
			:46:02.1
	BNH	eP	20:56:47.8
		eS	:56.0

7/23/75	BNH	e(P)	15:53:38.
	BNH	e(P)	15:58:49.
	WES	eP	16:00:31.3
	BNH	e(P)	16:01:07.
	BNH	iP	16:09:21.6
		eS	:38.0
	BNH	e(P)	16:46:04.
			:16.4
	BNH	e(P)	17:13:34.
	BNH	e(P)	17:43:23.
	BNH	iP	18:36:36.5
		eS	:44.0
	BNH	e(P)	19:49:29.
		e(S)	:46.
	BNH	iP	20:43:26.9
		eS	:34.7
	BNH	e(P)	20:51:46.
	BNH	eP	21:41:40.6
	BNH	e(P)	21:57:12.
		e(S)	:33.
WES	eP	21:29:10.5	

7/24/75	BNH	eP	11:58:58.0
		eS	:59:07.1
	BNH	eP	16:07:03.7
		eS	:27.2
	BNH	e(P)	17:01:45.
	BNH	e(P)	18:45:41.
	BNH	iP	19:43:19.1
		iS	:36.7
	BNH	eP	20:47:38.0
	WES	iP	15:30:11.5
	BNH	e(P)	15:44:02.
		e(S)	:23.
	BNH	e(P)	15:57:00.
		eS	:23.7

7/25/75	WES	iP	14:04:17.2
		iS	:17.8
	WES	eP	15:16:04.3
			:10.1

D

C

Quarry Blasts: (continued)

7/25/75 (continued)	WES	eP	15:23:42.2	
		eS	:45.5	
	WES	eP	15:28:26.8	
		eS	:31.2	
	WES	eP	17:30:27.7	
		eS	:42.5	
7/26/75	BNH	iP	19:42:59.8	
		eS	:43:18.5	
7/28/75	WES	iP	16:44:06.8	C
	WES	eP	19:34:26.5	
	BNH	iP	19:46:43.0	
			:47:00.1	
	WES	iP	20:15:14.3	
		eS	:17.6	
	BNH	eS	20:53:06.4	
7/29/75	CBM	iP	15:21:20.5	CW
		e(S)	:22:27.	
	MIM	iP	15:21:43.8	CWS
		eS	:23:09.1	
	EMM	eP	15:21:47.8	C
		e(S)	:23:16.	
	BNH	eP	15:21:57.2	
		e(S ₁)	:24:34.	
	WES	e(P)	15:55:47.	
	EMM	eP	17:59:37.5	
		eSn	:59:58.8	
	CBM	eP	17:59:40.8	
		e(S)	18:00:02.	
	MIM	e(P)	17:59:51.	
		e(S)	18:00:17.	
	BNH	eP	19:39:19.1	
	BNH	iP	19:47:19.0	C
		eS	:36.8	
	BNH	eP	21:20:28.4	
		eS	:47.0	
	BNH	eP	22:05:08.1	
		eS	:31.4	
7/30/75	CBM	iP	13:43:25.8	
		eSn	:43.0	
	EMM	eP	13:43:36.2	
		eS	:44:02.3	
	FLR	eP	16:06:51.8	
		e(S)	:57.	
	BNH	eP	16:15:06.0	
		eS	:13.3	
	BNH	eP	16:49:21.1	
		eS	:49.0	
	EMM	iP	17:40:42.3	C
		e(S)	:41:06.	

Quarry Blasts: (continued)

7/30/75 (continued)	EMM	iP	17:47:25.8	C
		eS	:47.1	
	EMM	eP	18:08:16.8	
		eS	:38.9	
	CBM	e(S)	19:36:17.	
	BNH	eP	19:45:36	
	BNH	e(P)	21:11:46.0	
	BNH	iP	21:46:21.8	D
		eS	:43.7	
	BNH	e(P)	21:58:16.	
7/31/75	EMM	eP	14:10:53.9	
		e(S)	:11:17.	
	CBM	e(P)	14:10:53	
		e(S)	:11:17.	
	MIM	eP	14:11:07.8	
		e(S)	:33.	
	EMM	eP	15:20:11.9	
		eSn	:34.8	
	CBM	eP	15:20:10.7	
		e(S)	:33.	
	EMM	eP	17:54:17.5	
		eS	:39.2	
	CBM	e(S)	17:54:42.	
	EMM	eP	17:55:23.8	
		eS	:48.0	
	BNH	eP	19:07:34.6	
		e(S)	:47.	
	BNH	eP	19:45:01.4	
		eS	:18.1	
	BNH	eS	21:57:36.1	
	BNH	iP	22:14:42.7	CEN
		eS	:58.8	
	BNH	eP	22:26:07.0	
		eS	:32.5	

Suspected Local Earthquakes:

7/16/75	BNH	e(P)	10:23:40	
7/17/75	WES	iP	17:30:18.6	D
		e(S)	:23.	

Suspected Quarry Blasts:

7/2/75	WES	e(P)	16:40:06.	
	BNH	e(P)	18:37:00.	
	WES	e(P)	20:00:12.	
7/3/75	WES	e(S)	16:42:55	
	WES	iP	17:15:21.4	
			:42	
	WES	iP	17:25:54.7	

Suspected Quarry Blasts: (continued)

7/3/75	BNH	1P	11:06:50.8
(continued)		1S	:07:13.1
	BNH	e(P)	15:52:47.
	WES	e(L)	18:30:23.
	WES	1P	19:07:29.1
7/4/75	BNH	1P	01:29:31.6
		1S	:56.4
7/7/75	WES	1P	15:49:19.0
	BNH	e(P)	19:43:47.
			:44.06.
	MIM	eP	19:44:10.
7/8/75	FLR	1P	15:46:55.7
	WES	1P	17:26:40.8
	BNH	e(P)	19:36:56.6
7/10/75	WES	1P	15:19:45.9
		1S	:47.1
	BNH	e(P)	15:54:48.
	BNH	e(P)	16:31:04.
	WES	1P	18:55:08.6
	BNH	e(P)	21:30:40.
	BNH	e(P)	21:39:12.
	BNH	1P	22:33:09.6
		1S	:43.6
	WES	1P	23:59:48.6
		1S	:51.0
7/11/75	BNH	1P	01:21:42.2
		1S	:22:06.3
	MIM	e(P)	01:22:06.
	BNH	1P	01:43:27.6
		eS	:52.
	BNH	e(S)	18:28:07.8
7/12/75	BNH	e(P)	15:34:31.
7/14/75	FLR	eP	21:07:09.4
7/15/75	WES	e(P)	18:09:25.
	WES	eP	16:07:44.2
	FLR	1P	16:08:31.1
		1S	:33.3
	FLR	1S	19:04:50.1
7/16/75	WES	eP	15:48:42.3
	BNH	eP	15:57:00.
	WES	e(P)	16:20:54.
	MIM	e(P)	17:34:08.
		e(S)	:36.
	WES	1P	17:52:27.4
		eS	:44.1
	FLR	1P	17:52:27.7
		eS	:45.1

C

C

Suspected Quarry Blasts: (continued)

7/17/75	BNH	e(S)	15:46:00.	
	WES	e(S)	15:59:52.	
	BNH	e(P)	19:50:30.	
7/21/75	BNH	eS	17:43:25.5	
	BNH	e(S)	20:45:27.	
7/22/75	WES	e(P)	14:52:43.	
7/23/75	BNH	e(P)	14:04:52.	
	BNH	e(P)	16:30:27.	
	BNH	e(P)	16:48:08.	
	BNH	e(P)	17:26:09.	
	BNH	e(P)	22:24:46.	
	BNH	eP	22:32:50.5 :33.18.3	
7/24/75	FLR	eP	16:00:43.2	
	WES	iP	16:11:28.5	D
	BNH	eP	21:26:43.8	
7/25/75	BNH	e(S)	15:58:36.	
	FLR	iP	16:13:38.6	
		eS	:40.8	
	WES	eP	16:13:51.5	
		e(S)	:14:01.3	
	WES	eP	16:16:48.0	
		eS	:17:06.	
	WES	eP	16:19:08.6	
	BNH	eP	17:59:58.9	
		e(S)	18:00:12.	
	BNH	e(S)	20:09:23.	
7/26/75	BNH	iP	00:31:23.5	CW
		eS	:47.6	
	WES	e(P)	00:32:41	
7/28/75	BNH	e(P)	15:56:52.	
		eS	:57:13.4	
	BNH	iP	16:07:07.4	D
		eSn	:14.7	
		eS	:16.5	
	BNH	iP	16:12:51.5	DW
	eS	:13:15.7		
7/29/75	BNH	eP	12:30:31.5	
	EMM	eP	13:54:17.5	
	EMM	e(P)	15:38:00.	
	BNH	e(S)	16:46:52.	
	BNH	e(P)	18:12:42.	
	CBM	eP	18:58:29.4	
		e(S)	:49.	
	EMM	eP	18:58:54.5	
		e(S)	:59:29.	
BNH	e(P)	19:29:44.		

Suspected Quarry Blasts: (continued)

7/30/75	WES	e(P)	14:30:00.	
	WES	e(P)	16:04:00.	
	WES	e(P)	16:06:00.	
	WES	e(P)	16:40:00.	
	CBM	eP	17:27:57.2	
7/31/75	BNH	eP	14:03:05.1	
	WES	e(P)	16:11:13.	
	FLR	iP	16:11:02.3	CEN
	WES	e(P)	16:14:32.	

Teleseisms:

7/4/75	BNH	e(P)	20:59:21.	
	WES	iP	20:59:28.9	D
	FLR	e(P)	20:59:30	
7/8/75	WES	eP	09:44:26.3	C
	BNH	iP	09:44:30.0	D
	FLR	e(P)	09:44:32.	D
	MIM	e(P)	09:44:45.	
	WES	iP	12:23:08.4	D
7/9/75	BNH	e(P)	14:58:20.	
	WES	e(P)	14:58:28.	
	MIM	e(P)	14:58:39.	
7/11/75	BNH	iP	19:13:17.4	D
7/12/75	WES	iP	06:57:23.0	C
	BNH	iP	06:57:38.7	C
	FLR	iP	06:57:18.2	C
7/16/75	BNH	iP	15:30:26.4	D
	MIM	iP	15:30:34.0	E
7/20/75	BNH	iPKP	14:56:36.1	D
	WES	iPKP	14:56:37.7	D
	FLR	ePKP	14:56:38.5	
	MIM	ePKP	14:56:37.0	
	BNZ	iPKP	20:13:25.4	C
	BNH	iPKP	23:24:15.9	
	WES	ePKP	23:24:17.5	
7/21/75	BNH	iPKP	02:22:56.8	D
	WES	ePKP	02:22:59.0	
	BNH	iPKP	02:57:52.1	C
	WES	iPKP	02:57:54.0	C
	FLR	iPKP	02:57:54.8	C
7/25/75	BNH	iP	10:49:53.9	CES
	WES	iP	10:50:05.1	C

Teleseisms: (continued)

7/28/75	BNH	iP	03:22:14.3	D
7/30/75	BNH	iP	09:36:48.2	DWN
	EMM	eP	09:36:49.6	
	CBM	e(P)	09:36:51.	
	WES	iP	09:36:51.3	D
	FLR	eP	09:36:53.9	
	BNH	e(P)	10:43:11.	
	CBM	e(P)	10:43:14.	
	EMM	eP	10:43:15.0	
	FLR	e(P)	10:43:21.	
7/31/75	CBM	eP	15:37:04.7	
	EMM	eP	15:37:11.5	
	BNH	iP	15:37:11.7	D
	MIM	eP	15:37:12.3	
	WES	eP	15:37:18.0	