55AA

BEHAVIOR OF SINGLE PILE AND PILE GROUP IN OVERCONSOLIDATED CLAY UNDER RELATIVELY LOW FREQUENCY LOADING

By

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APPENDICES C - G

December, 1982

Fugro-Gulf, Inc.

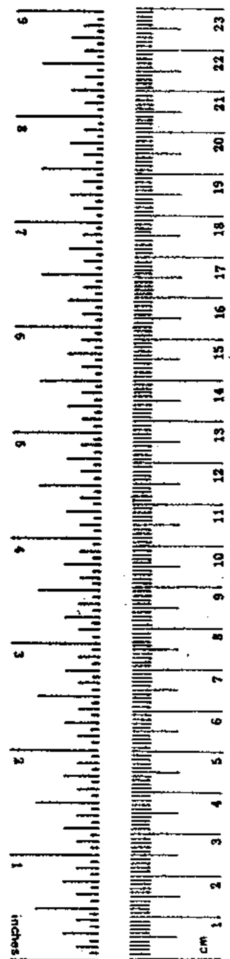
University of Houston

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

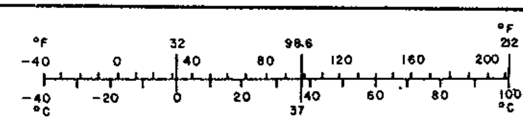
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



METRIC CONVERSION FACTORS

PREFACE

This report describes the results of an experimental and analytical study of dynamic behavior of a full-scale pile and full-scale group of vertically oriented piles driven in overconsolidated clay. The test piles were subjected to dynamic loads applied at the pile-head level. The magnitudes of the loads were sufficient to develop some nonlinear behavior in the supporting soil, which was submerged, but were not sufficient to approach soil failure.

One aim of the study was to make comparisons between measurements along the piles and predictions from state-of-the-art computational models. Models were chosen from three categories (discrete element, continuum, and finite element), and executed with varying descriptive soil inputs in order to observe how well the models matched the measurements and whether relatively common geotechnical information could be used to characterize the soil.

Because very little data on the dynamic performance of full-scale piles are presently available, a secondary aim was to collect high-quality data on the dynamic behavior of piles that can be used to test future theories.

The study began in June, 1980, and was completed in December, 1982. Most of the full-scale testing occurred in the summer of 1981. The study was sponsored by ten participating industrial and government organizations whose support was greatly appreciated:

Brown and Root, Inc.,
Chevron Oil Field Research Company,
Cities Service Company,
Exxon Production Research Company,
Marathon Oil company,
Mobil Field Research Company,
Raymond Technical Services, Inc.,
Shell Development Company,
U.S. Department of the Interior (M.M.S.)
U.S. Department of Transportation (F.H.W.A.)

This report is bound in two parts. The first part contains the basic report and Appendices A and B (References and Notations). The second part contains Appendices C - G, which provide detailed documentation of the soil properties, instruments, test records, and data reduction procedure.

In some places manufacturers' names have been used to provide descriptions of instruments that are as specific as possible. This in no way constitutes an endorsement of these instruments by either Fugro-Gulf, Inc., or the University of Houston.

This report reflects the views of the authors, who are responsible for the facts and accuracy of the information contained herein. The contents do no necessarily reflect the official view of Fugro-Gulf, Inc., or the University of Houston.

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Geoffrey W. Blaney
Gordon L. Muster, II

December 15, 1982

APPENDIX C

Detailed Soil Data

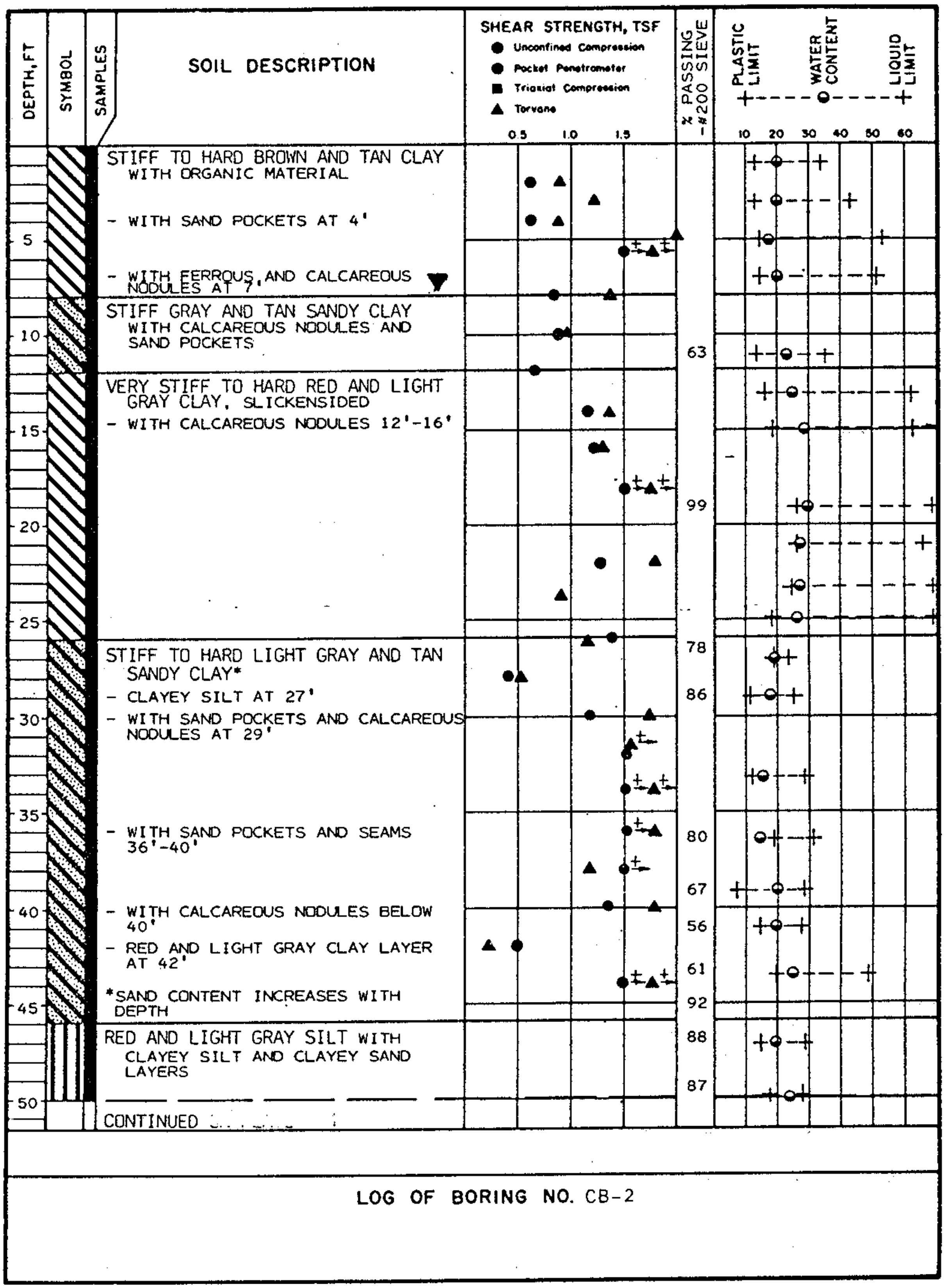


Fig. C.1. Boring Log CB-2 (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

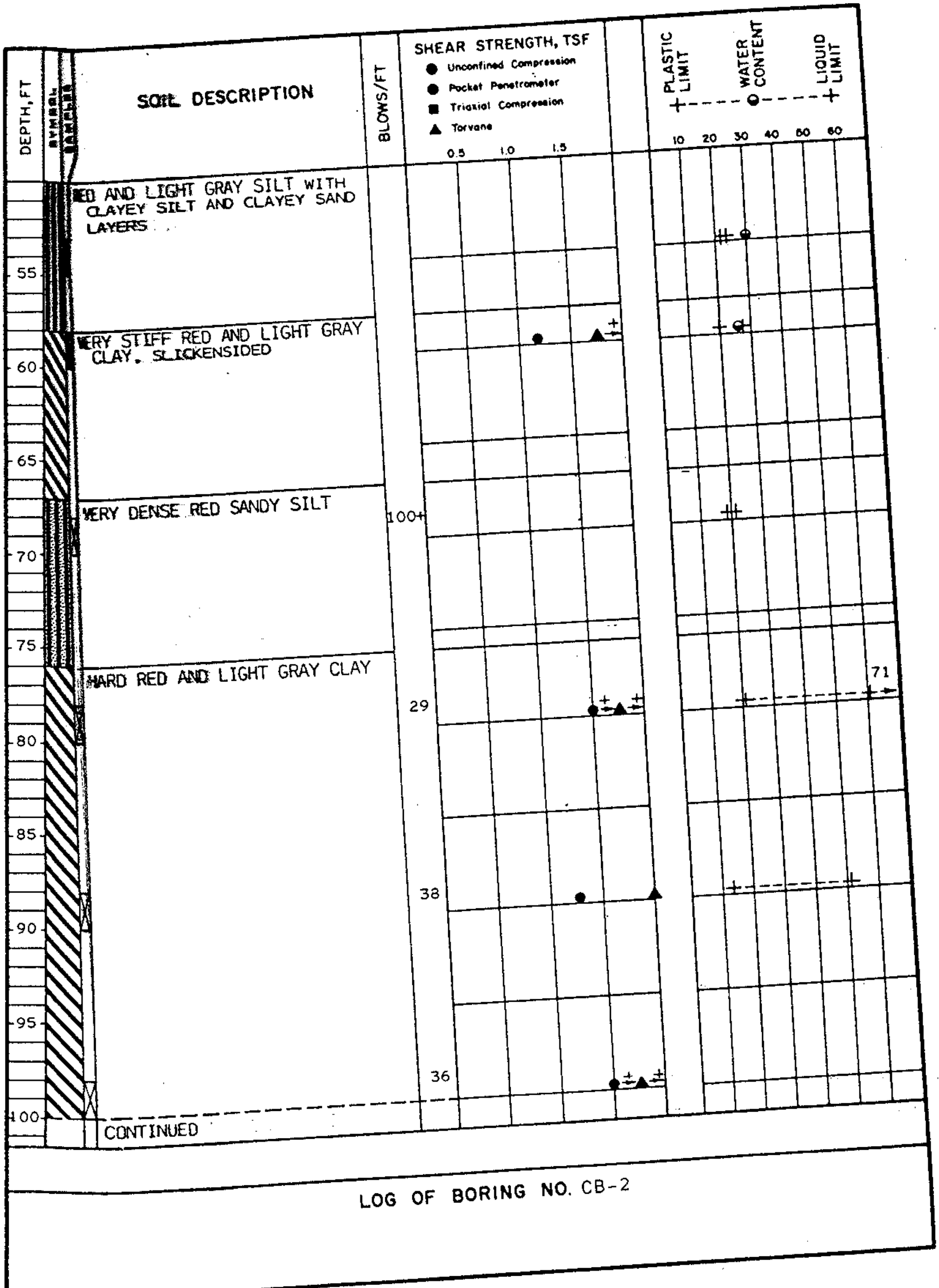

DEPTH, FT
SYMBOL
SAMPLES
SOIL DESCRIPTION
BLOWS/FT
SHEAR STRENGTH, TSF
Unconfined Compression
Pocket Penetrometer
Triaxial Compression
Torvane
0.5 1.0 1.5
PLASTIC LIMIT
WATER CONTENT
LIQUID LIMIT
10 20 30 40 50 60
55
60
65
70
75
80
85
90
95
100
RED AND LIGHT GRAY SILT WITH CLAYEY SILT AND CLAYEY SAND LAYERS
VERY STIFF RED AND LIGHT GRAY CLAY, SLICKENSIDED
VERY DENSE RED SANDY SILT
HARD RED AND LIGHT GRAY CLAY
100+
29
38
36
71
CONTINUED
LOG OF BORING NO. CB-2

Fig. C.1. Cont'd.

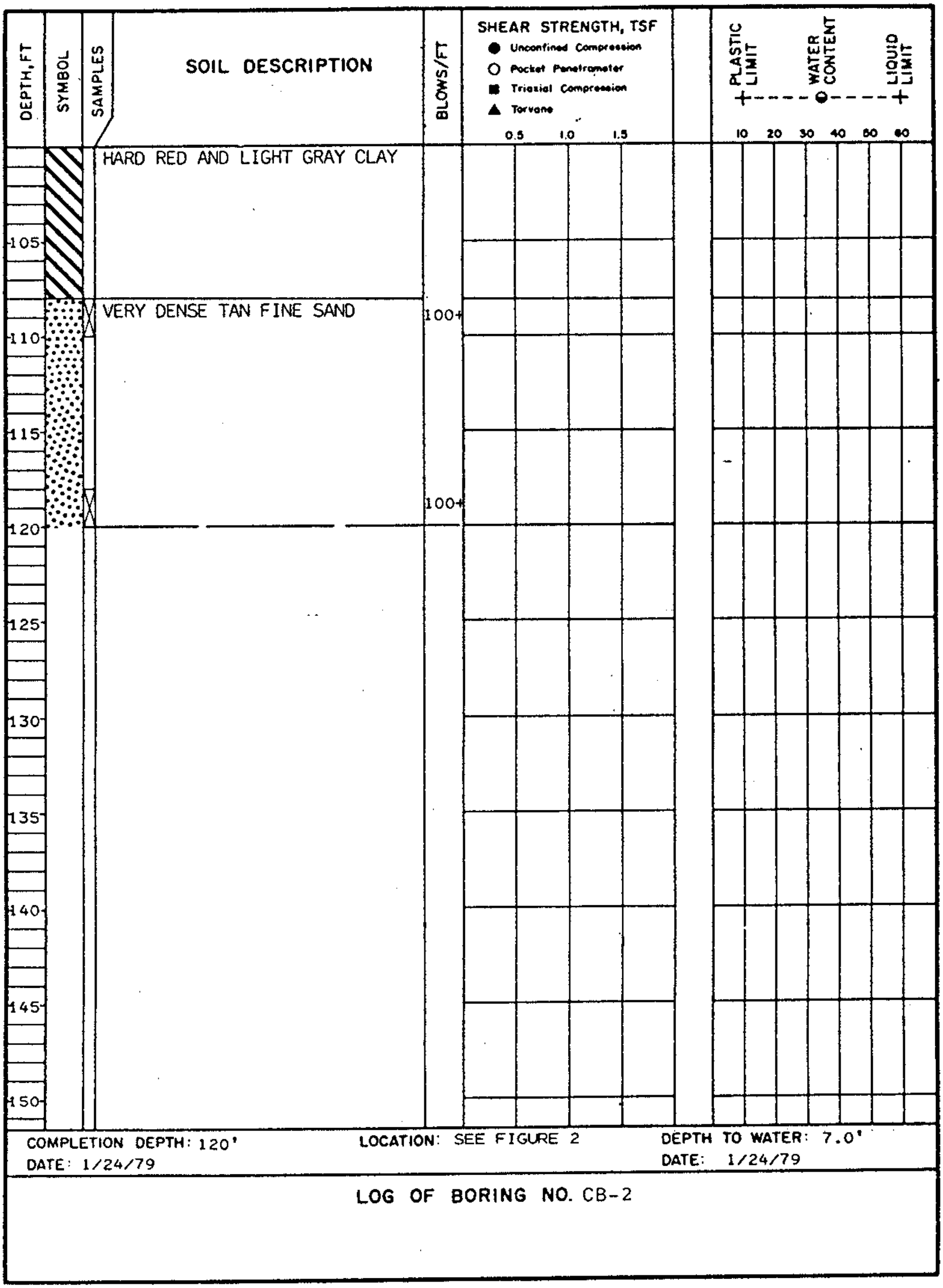

DEPTH, FT
SYMBOL
SAMPLES
SOIL DESCRIPTION
BLOWS/FT
SHEAR STRENGTH, TSF
Unconfined Compression
Pocket Penetrometer
Triaxial Compression
Torvane
0.5
1.0
1.5
PLASTIC LIMIT
WATER CONTENT
LIQUID LIMIT
10
20
30
40
50
60
HARD RED AND LIGHT GRAY CLAY
105
VERY DENSE TAN FINE SAND
100+
110
115
100+
120
125
130
135
140
145
150
COMPLETION DEPTH: 120'
DATE: 1/24/79
LOCATION: SEE FIGURE 2
DEPTH TO WATER: 7.0'
DATE: 1/24/79
LOG OF BORING NO. CB-2

Fig. C.1. Cont'd.

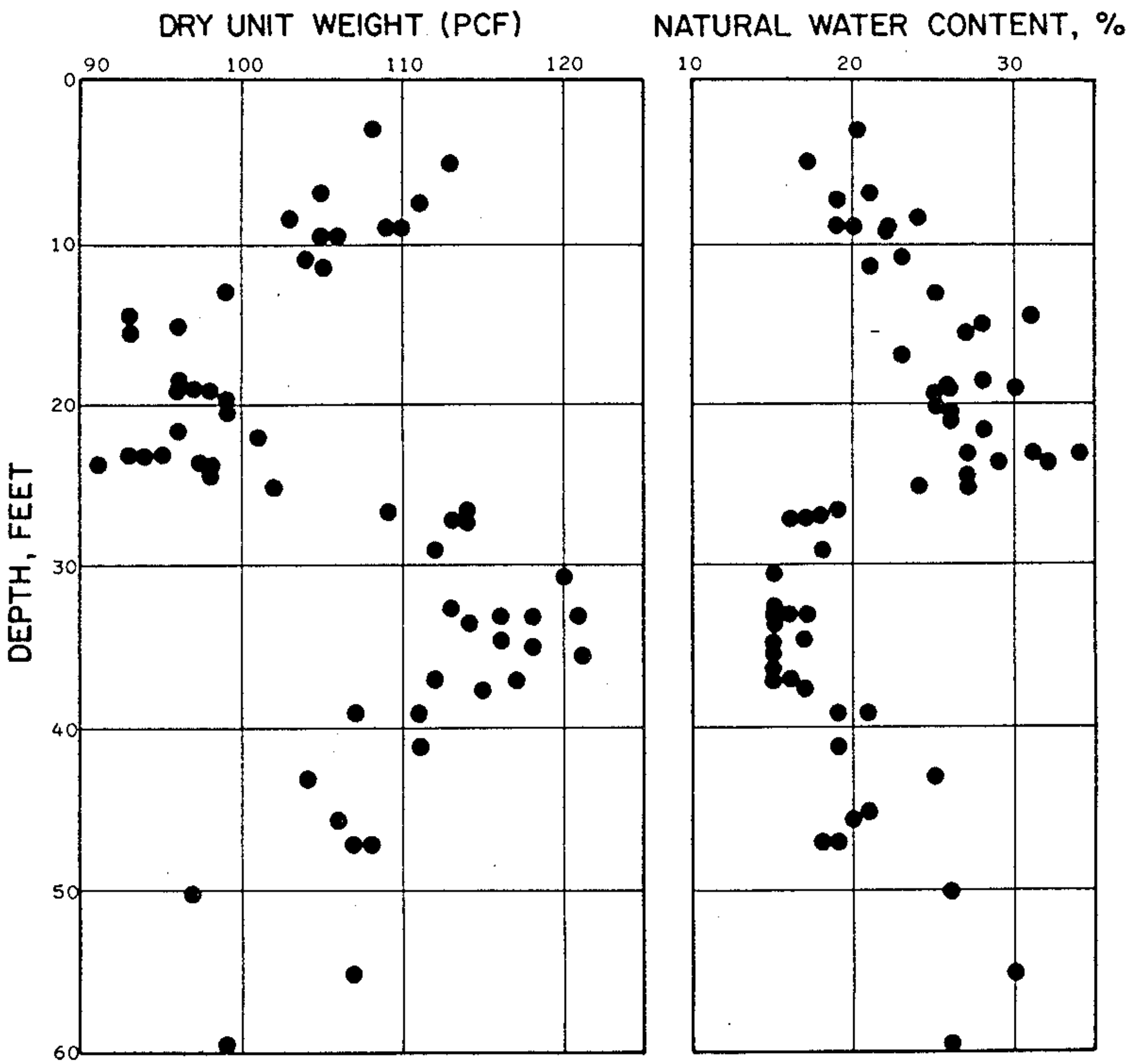


Fig. C.2. Unit Dry Weight and Moisture Content vs. Depth (1 lb = 4.45 N; 1 ft = 0.305 m).

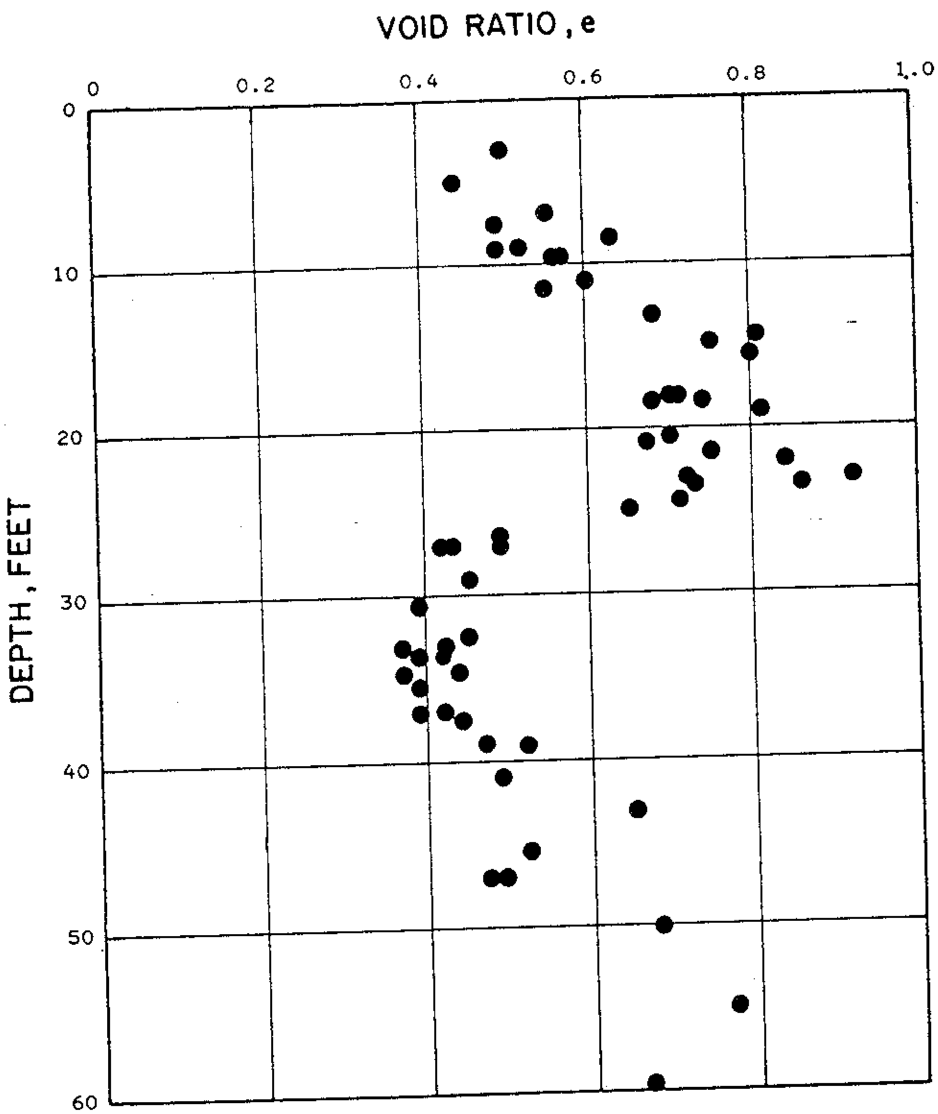


Fig. C.3. e vs. Depth (1 ft = 0.305 m).

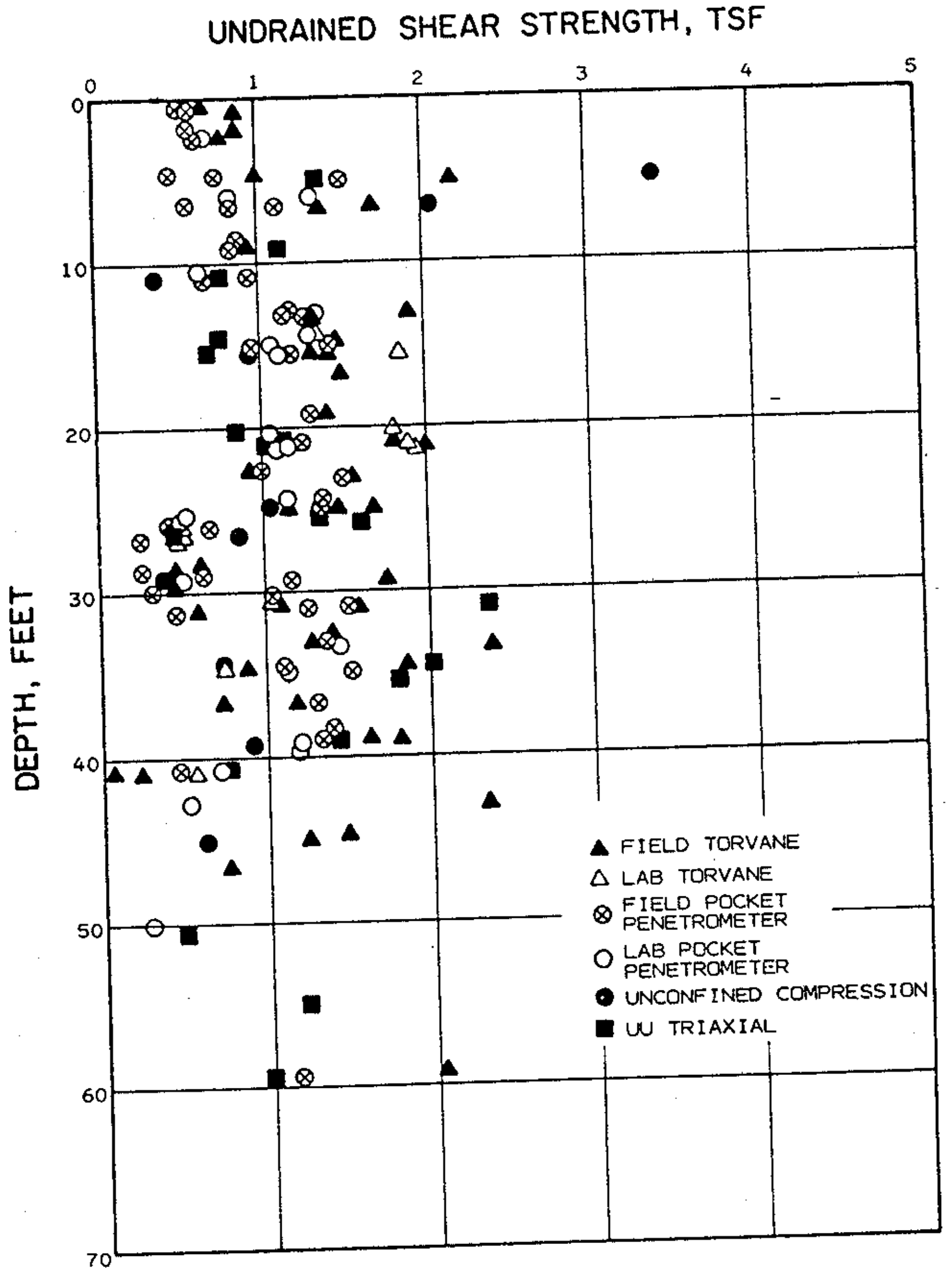
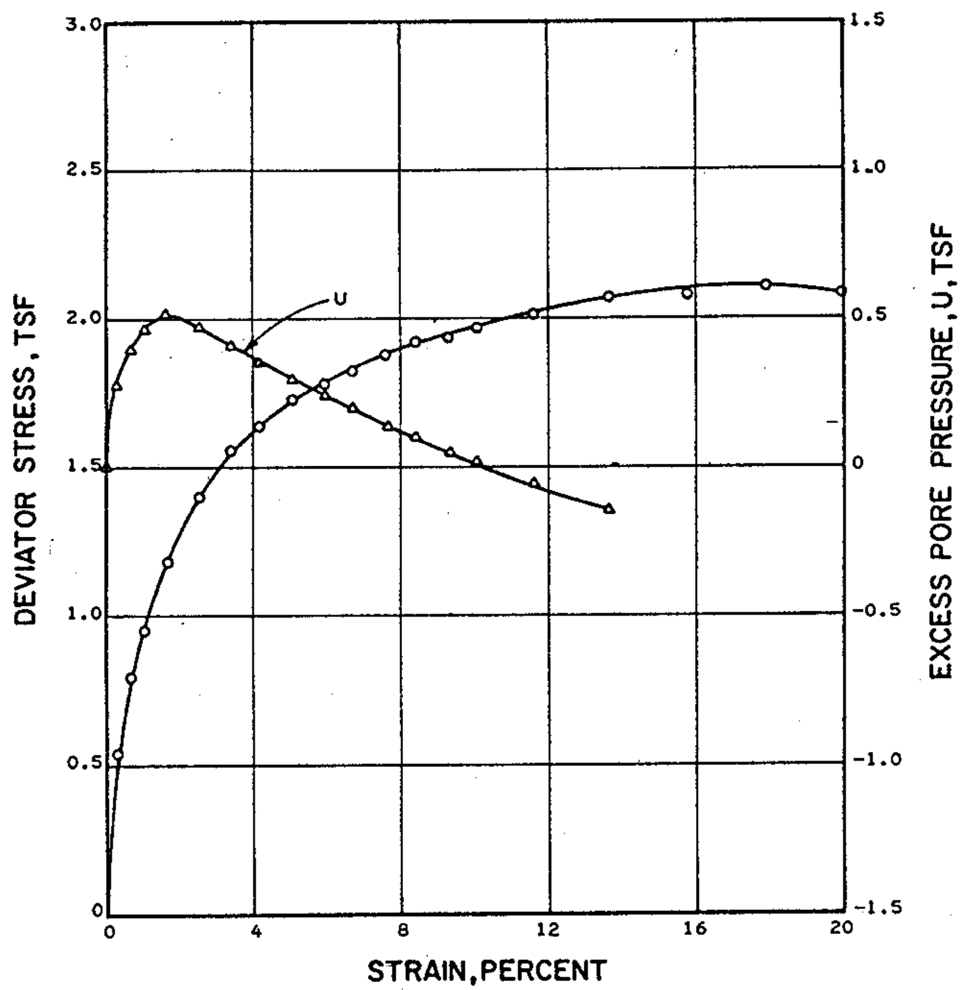


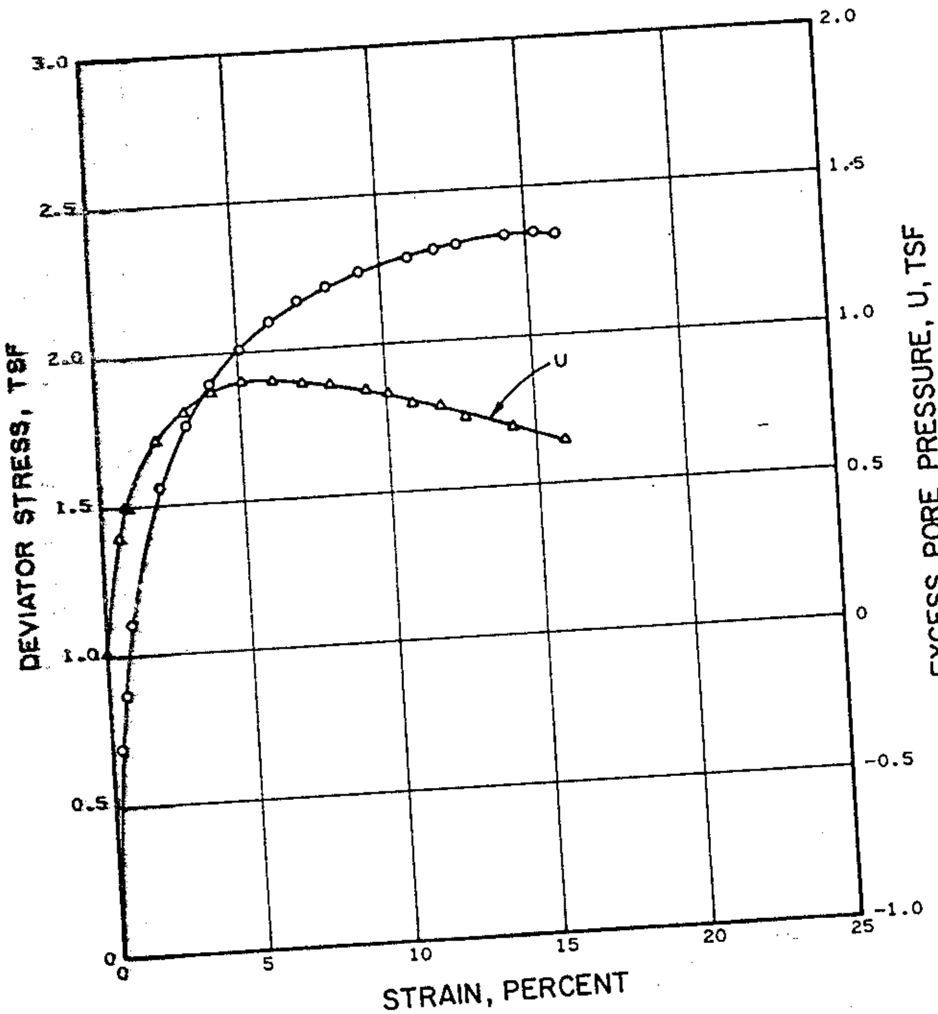
Fig. C.4. Composite of Undrained Shear Strength Results (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	8.5	0.72	VERY STIFF BROWN AND LIGHT GRAY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

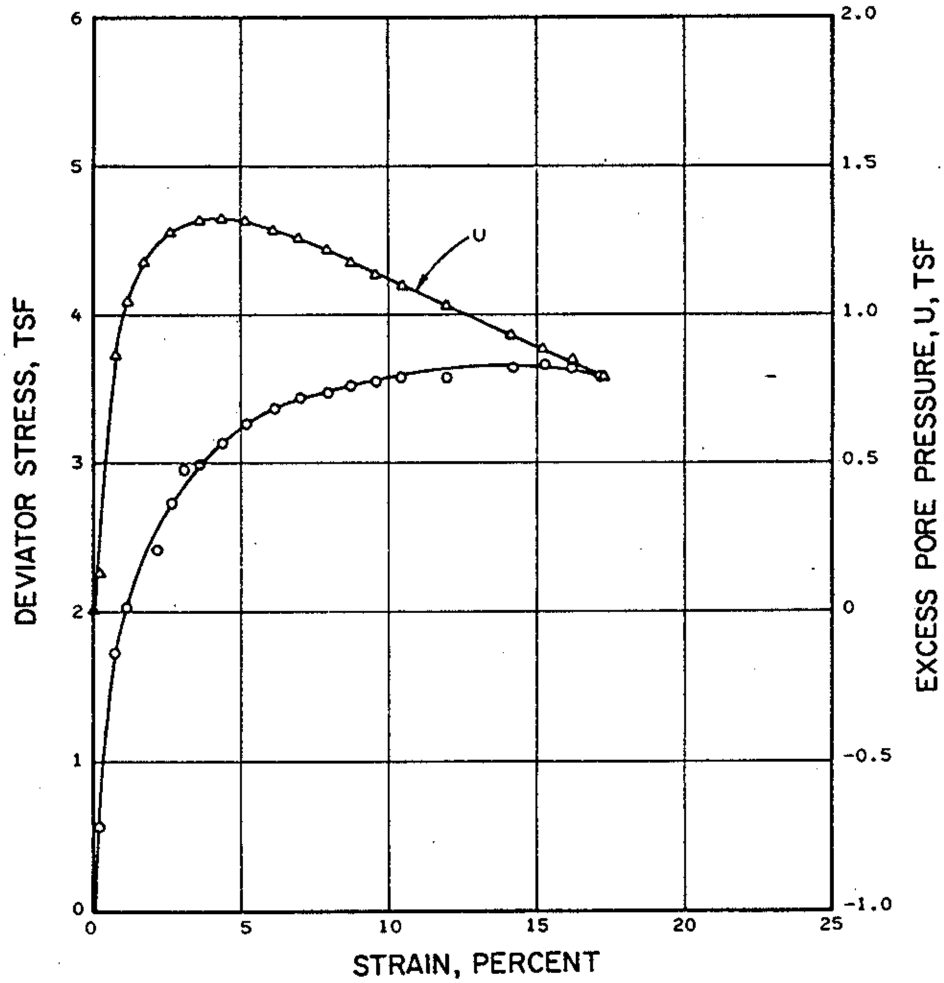
Fig. C.5. Stress - Strain Curve No. 1, 8.5 - 9.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-3	9.5	2.30	VERY STIFF BROWN AND LIGHT GRAY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.6. Stress - Strain Curve No. 2, 8.5 - 9.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	9	3.02	VERY STIFF BROWN AND LIGHT GRAY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.7. Stress - Strain Curve No. 3, 8.5 - 9.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

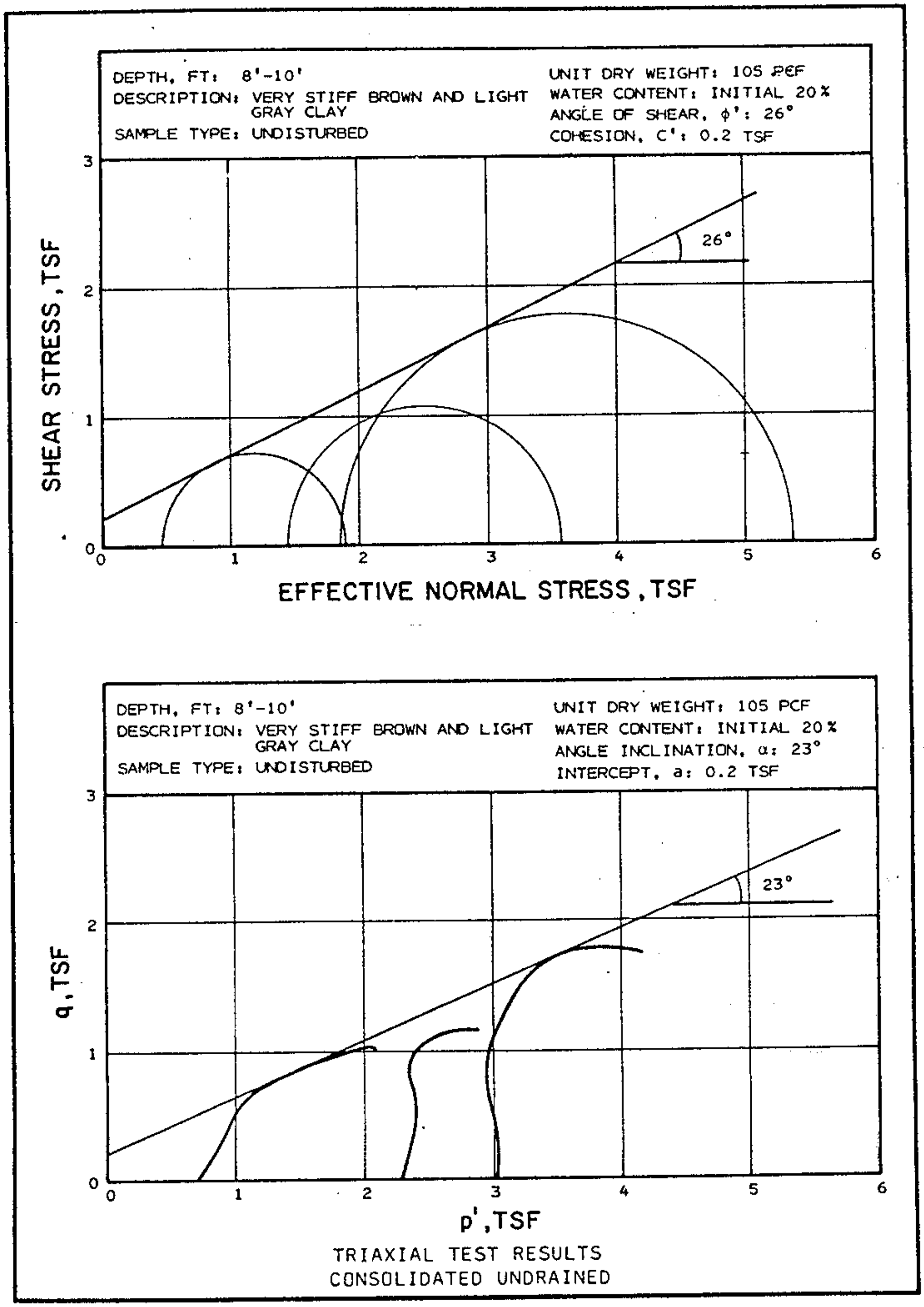
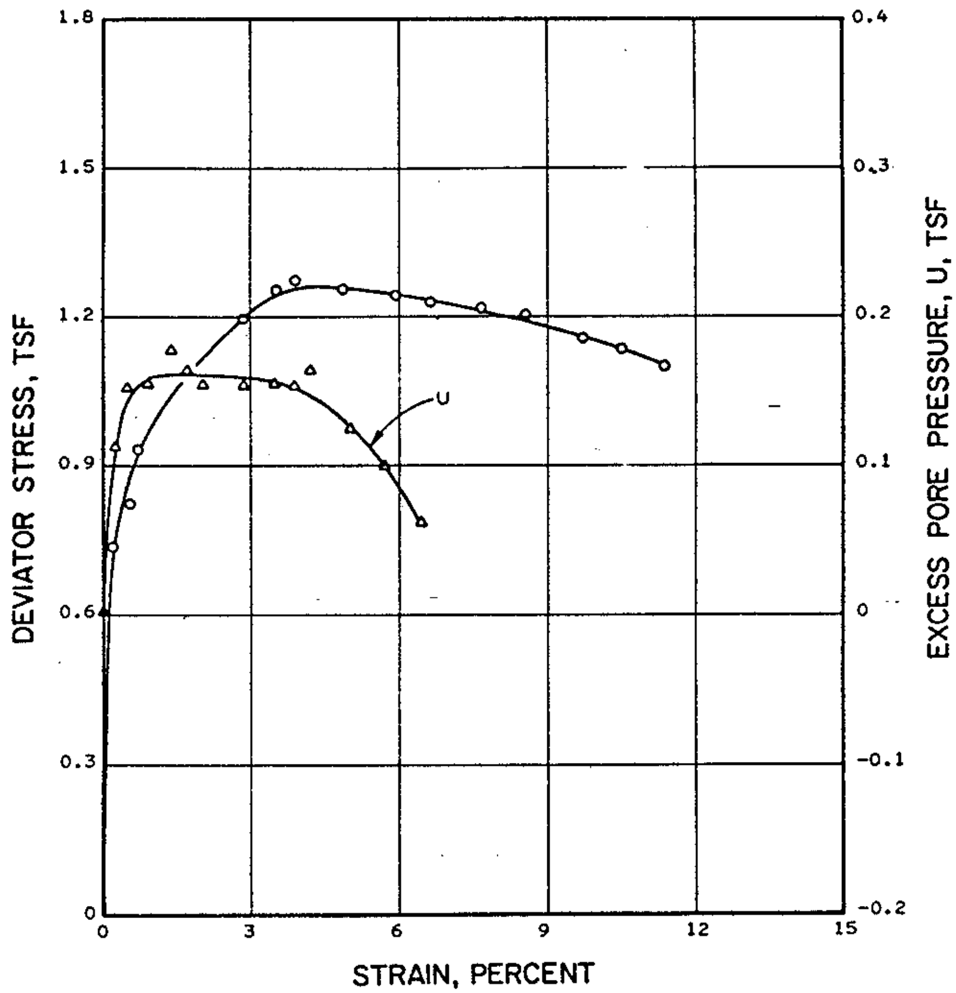


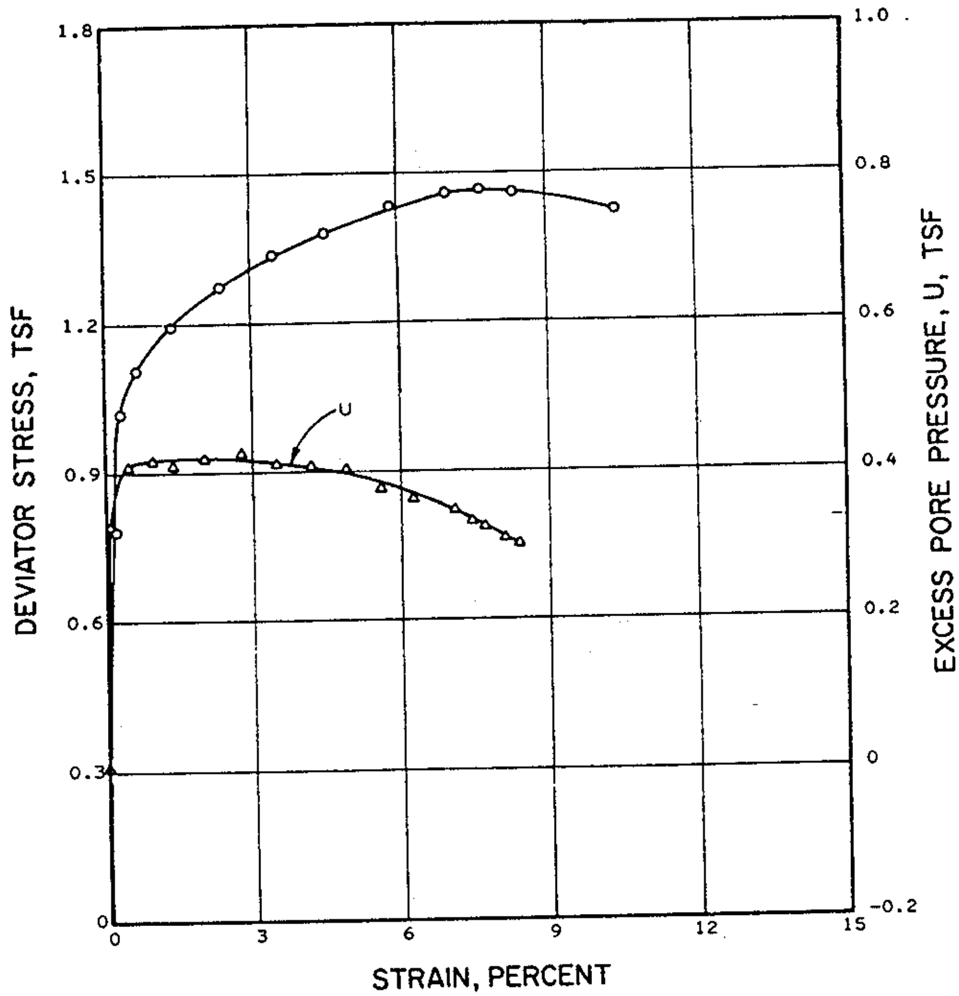
Fig. C.8. Failure Circles and Stress Paths, 8.5 - 9.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-3	19	1.15	STIFF RED AND LIGHT GRAY CLAY, SLICKENSIDED WITH CALCAREOUS NODULES

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

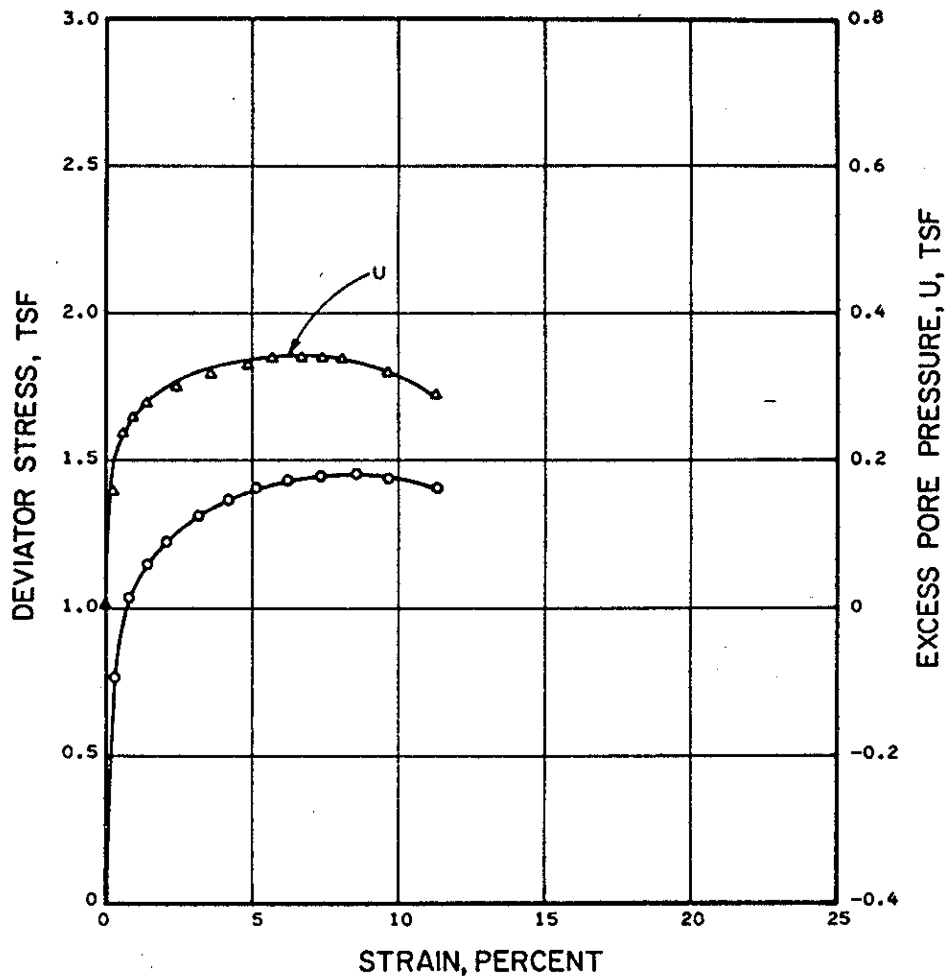
Fig. C.9. Stress - Strain Curve No. 1, 18 - 19.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	18.5	1.44	STIFF RED AND LIGHT GRAY CLAY, SLICKENSIDED WITH CALCAREOUS NODULES

PORE PRESSURE —STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.10. Stress - Strain Curve No. 2, 18 - 19.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	19.5	1.87	STIFF RED AND LIGHT GRAY CLAY, SLICKENSIDED WITH CALCAREOUS NODULES

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.11. Stress - Strain Curve No. 3, 18 - 19.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

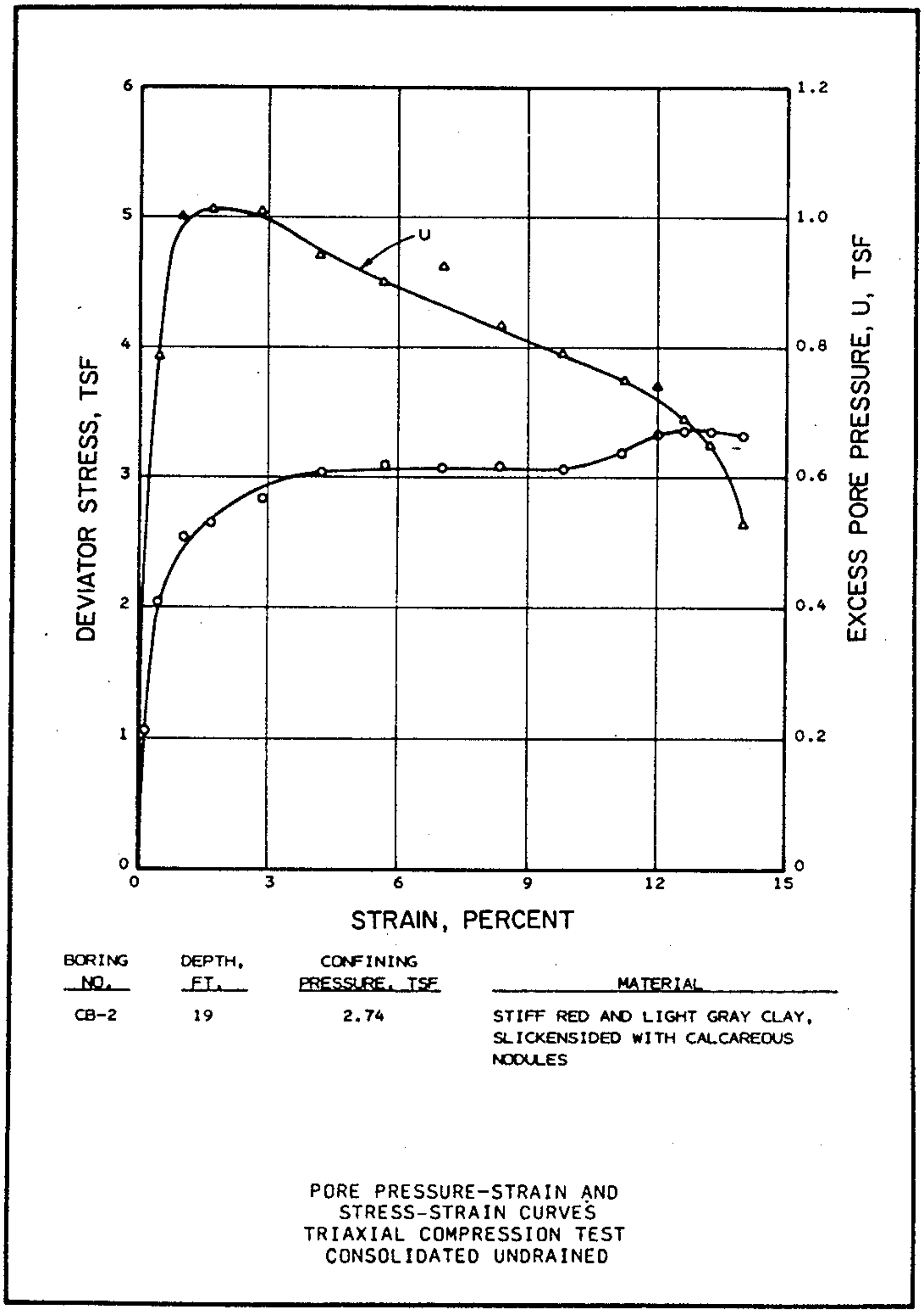


Fig. C.12. Stress - Strain Curve No. 4, 18 - 19.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

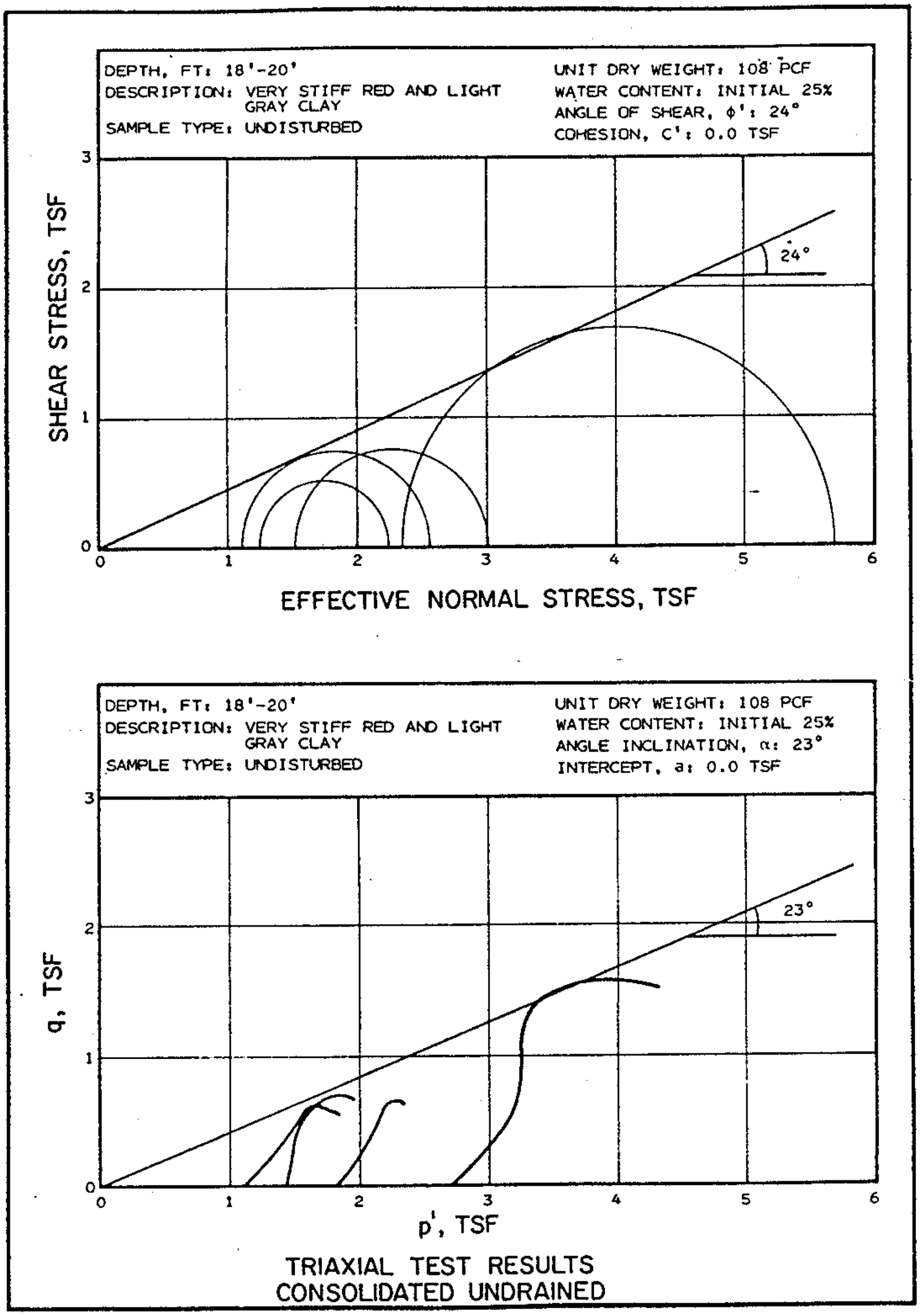
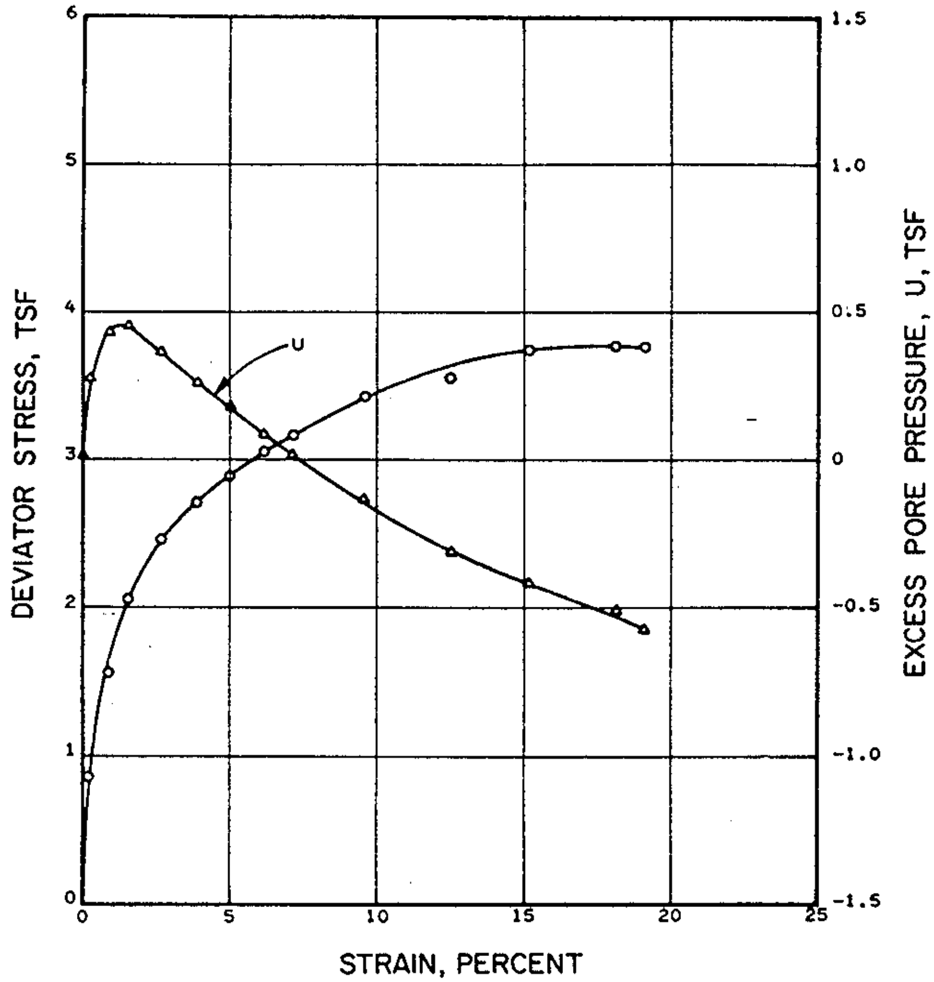


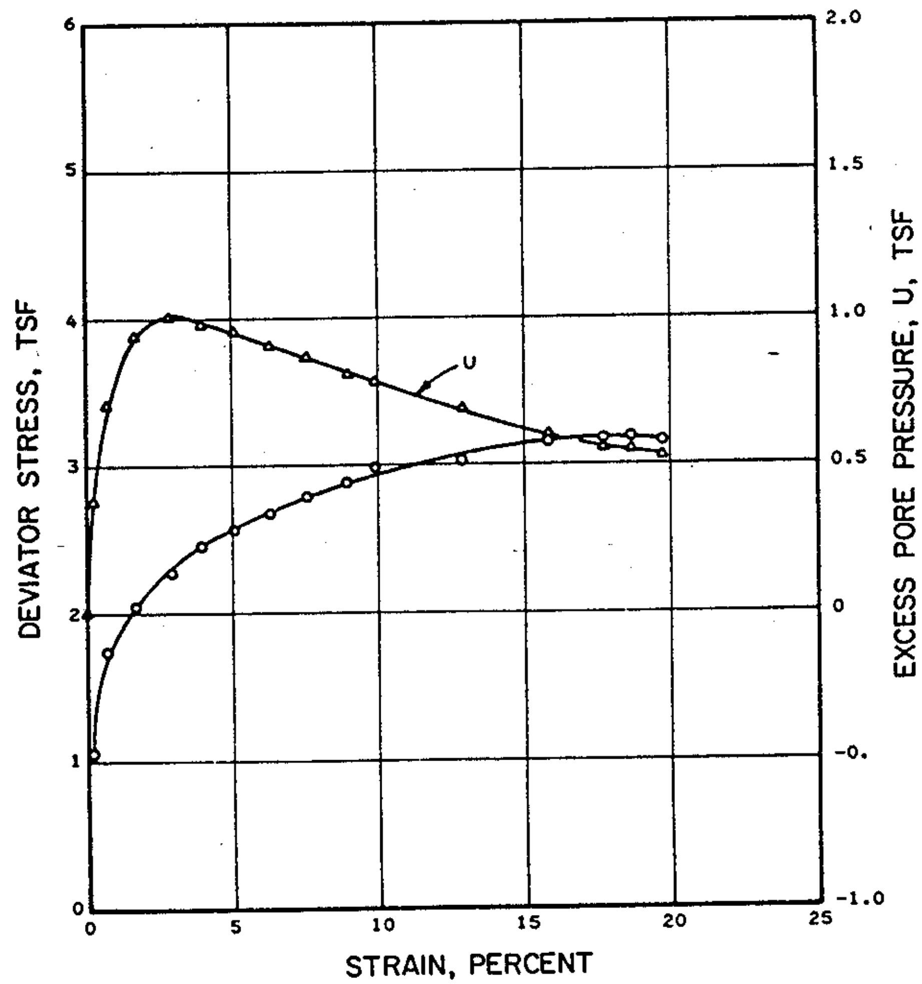
Fig. C.13. Failure Circles and Stress Paths, 18 - 19.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	33.5	1.30	VERY STIFF LIGHT GRAY AND TAN SANDY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

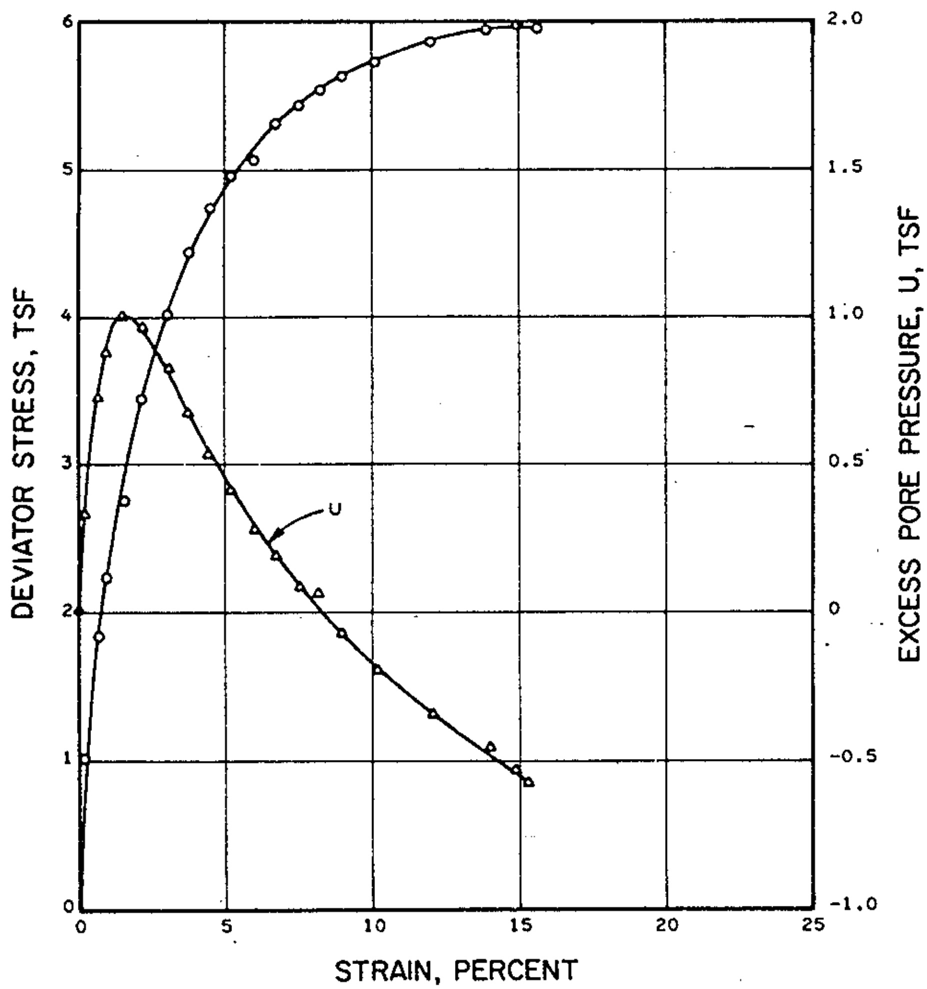
Fig. C.14. Stress - Strain Curve No. 1, 32.5 - 33.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-1	32.5	2.09	VERY STIFF LIGHT GRAY AND TAN SANDY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.15. Stress - Strain Curve No. 2, 32.5 - 33.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).



BORING NO.	DEPTH, FT.	CONFINING PRESSURE, TSF	MATERIAL
CB-3A	33.5	2.59	VERY STIFF LIGHT GRAY AND TAN SANDY CLAY

PORE PRESSURE-STRAIN AND
STRESS-STRAIN CURVES
TRIAXIAL COMPRESSION TEST
CONSOLIDATED UNDRAINED

Fig. C.16. Stress - Strain Curve No. 3, 32.5 - 33.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

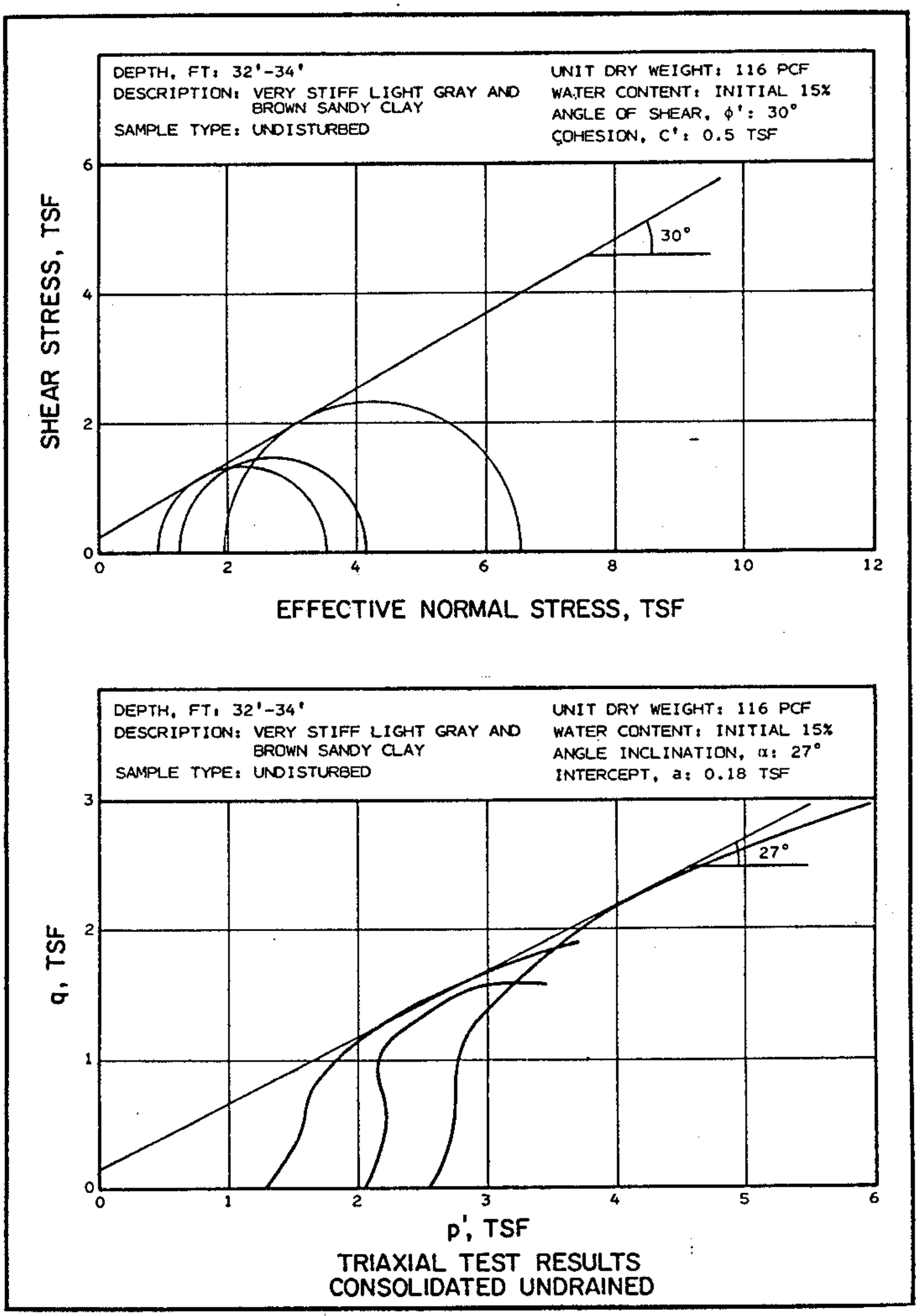


Fig. C.17. Failure Circles and Stress Paths, 32.5 - 33.5 Ft (1 ft = 0.305 m; 1 tsf = 95.8 kPa).

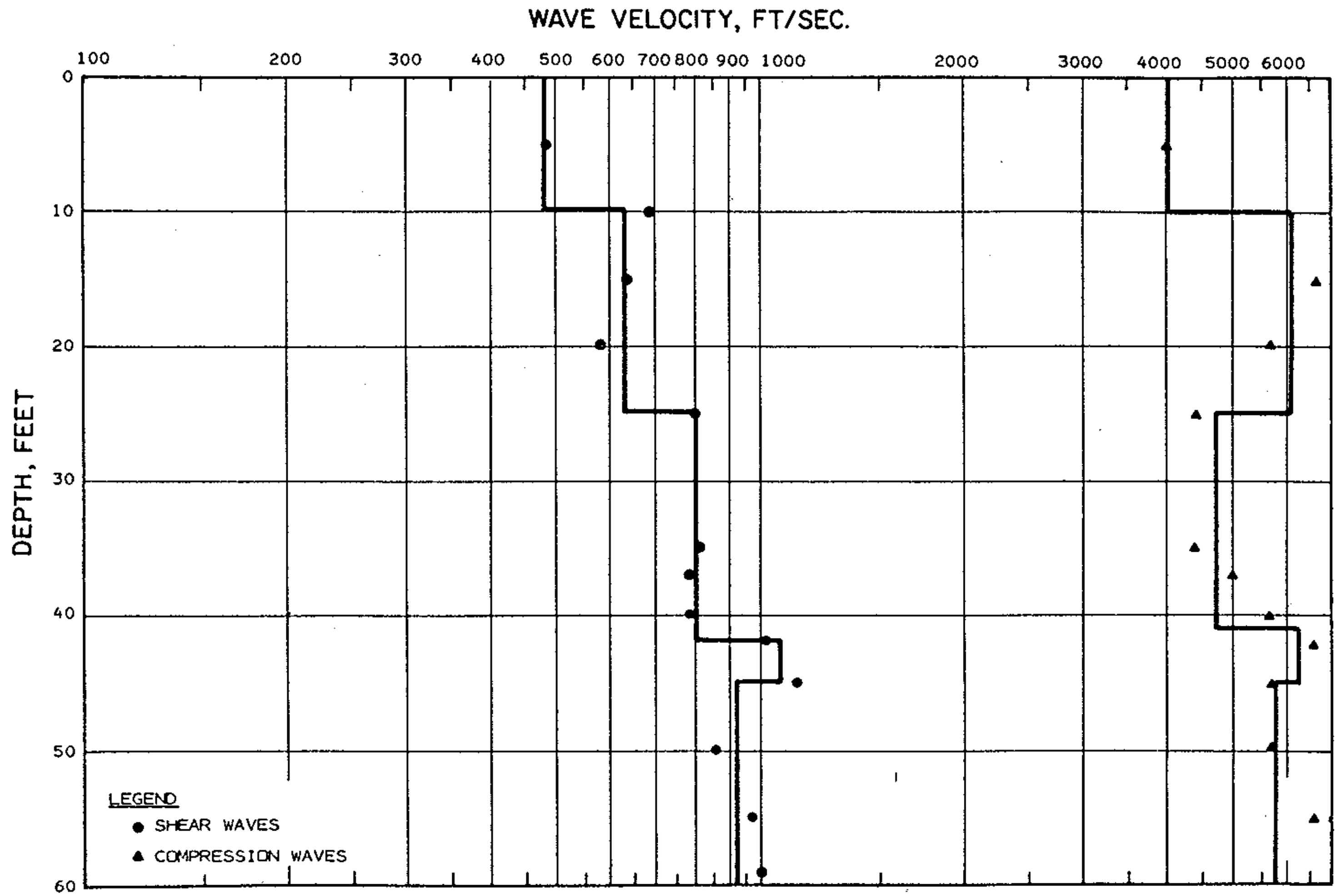


Fig. C.18. Shear and Compression Wave Velocities Before Driving Piles from Crosshole Tests (1 ft = 0.305 m).

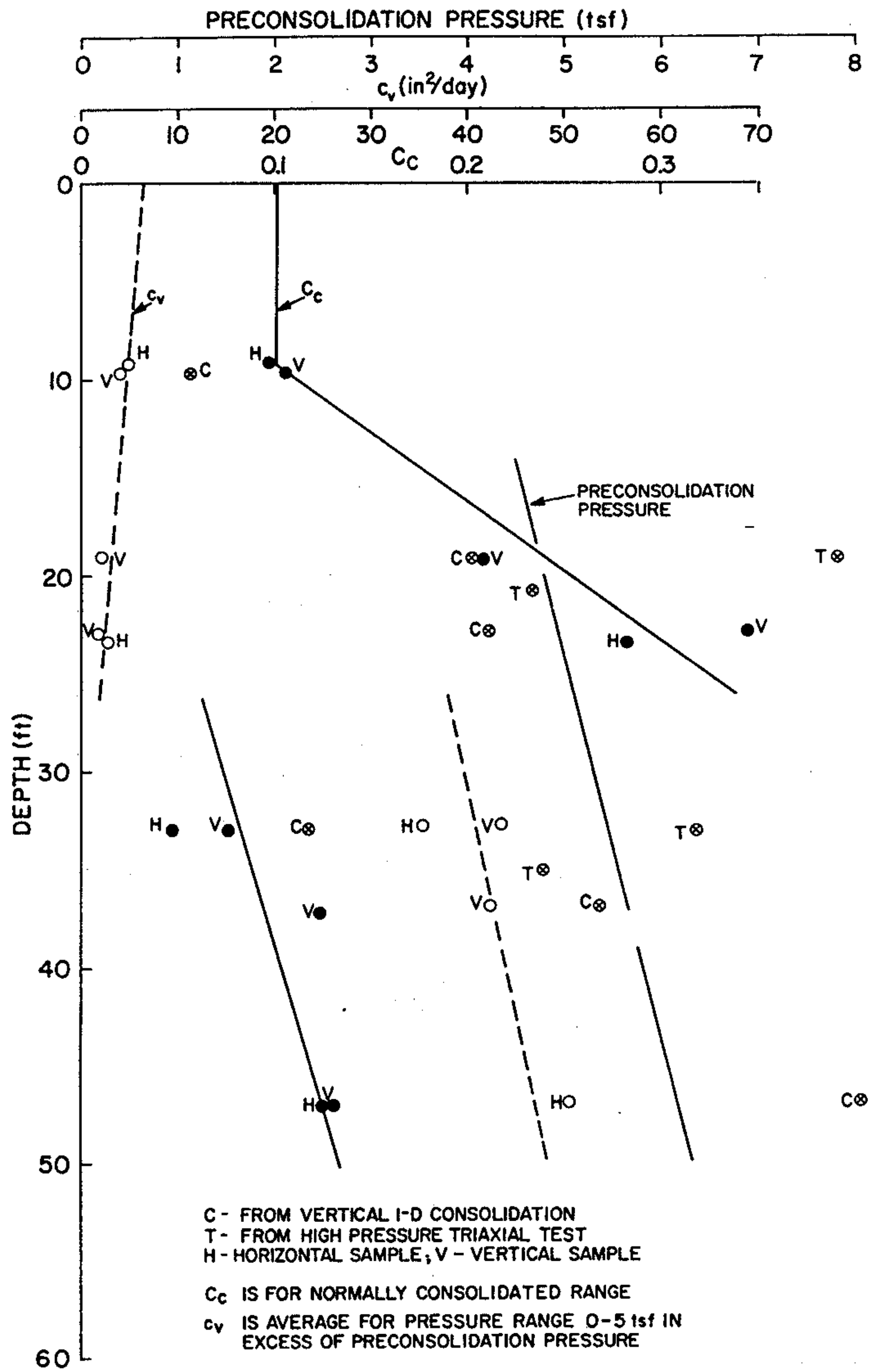


Fig. C.19. Summary of Consolidation Test Data (1 ft = 0.305 m; 1 in. = 25.4 mm; 1 tsf = 95.8 kPa, 1 day = 86,400 sec.).

Table C.1. Summary of Low-Amplitude Resonant Column Test Data
(1 psi = 6.89 kPa; 1 psf = 47.9 Pa)

Specimen	Effective Confining Pressure (psi)	G_{max} at 1,000 min. (1,000 psf)	I_G[a]	N_G[b]	D_{min} at 1,000 min. (%)
1	2.8	633			
	5.5	679	45	6.7	5.6
	11.0*	793	42	5.3	5.5
	22.0	996	126	12.7	5.5
	44.0	1,392	259	18.7	5.3
2	1.8	741			
	3.5	790	56	7.1	2.0
	7.0	881	40	4.6	2.0
	14.0*	982	81	8.2	1.9
	28.0	1,171	69	5.9	1.9
	56.0	1,486	188	12.7	1.8
3	2.5	394			
	4.3	458	55	12.0	4.0
	8.5	633	74	11.6	4.0
	17.0*	931	121	13.0	4.0
	34.0	1,536	174	11.4	3.7
	68.0	2,609	283	10.9	3.8

* Confining press. $\approx \bar{\sigma}_0$ in situ

a. $I_G = (G_1 - G_0)/\log_{10} (t_1/t_0)$ where t_1 and t_0 are times after primary consolidation and G_0 and G_1 are corresponding shear moduli

b. $N_G = (I_G/G_{max\ 1000}) \times 100\%$

Table C.2. Summary of High-Amplitude Resonant Column Test Data
(1 psi = 6.89 kPa; 1 psf = 47.9 Pa)

Specimen Number	Effective Confining Pressure (psi)	Shear Modulus, G, 10^6 psf, Single-Amplitude Shearing Strain (%)			Damping Ratio, D, Single-Amplitude Shearing Strain (%)		
		0.001	0.01	0.1	0.001	0.01	0.1
1	11.0*	0.82	0.78	0.47	5.2	6.4	9.5
	22.0	1.04	0.99	0.59	6.1	6.4	10.5
	44.0	1.56	1.49	0.91	5.0	5.7	9.6
2	14.0*	1.07	1.04	0.68	1.9	2.1	5.1
	28.0	1.23	1.20	0.79	1.8	1.8	4.2
	56.0	1.61	1.58	1.03	1.7	1.8	4.4
3	8.5	.67	0.58	0.25[a]	3.2	4.5	10.3[a]
	17.0*	1.05	0.93	0.43	3.8	4.5	10.3
	34.0	1.63	1.42	0.75	3.7	4.4	9.8
	68.0	2.71	2.46	1.28	3.6	4.3	10.2

*Confining pressure ≈ $\bar{\sigma}_o$ in situ

a. Extrapolated value

Table C.3. Soil Specimen Data (1 ft = 0.305 m; 1 in. = 25.4 mm; 1 pcf = 0.157 kN/m^3)

Specimen		Initial Properties						
No.	Depth (ft)	Height (in.)	Diameter (in.)	Void Ratio	Total Unit Weight (pcf)	Water Content (%)	Plasticity Index (%)	Unified Soil Classification
1	6.8	2.98	1.52	0.58	127	22	40	CH
2	16.7	2.93	1.48	0.71	125	28	45	CH
3	31.7	2.99	1.48	0.37	135	14	17	CL

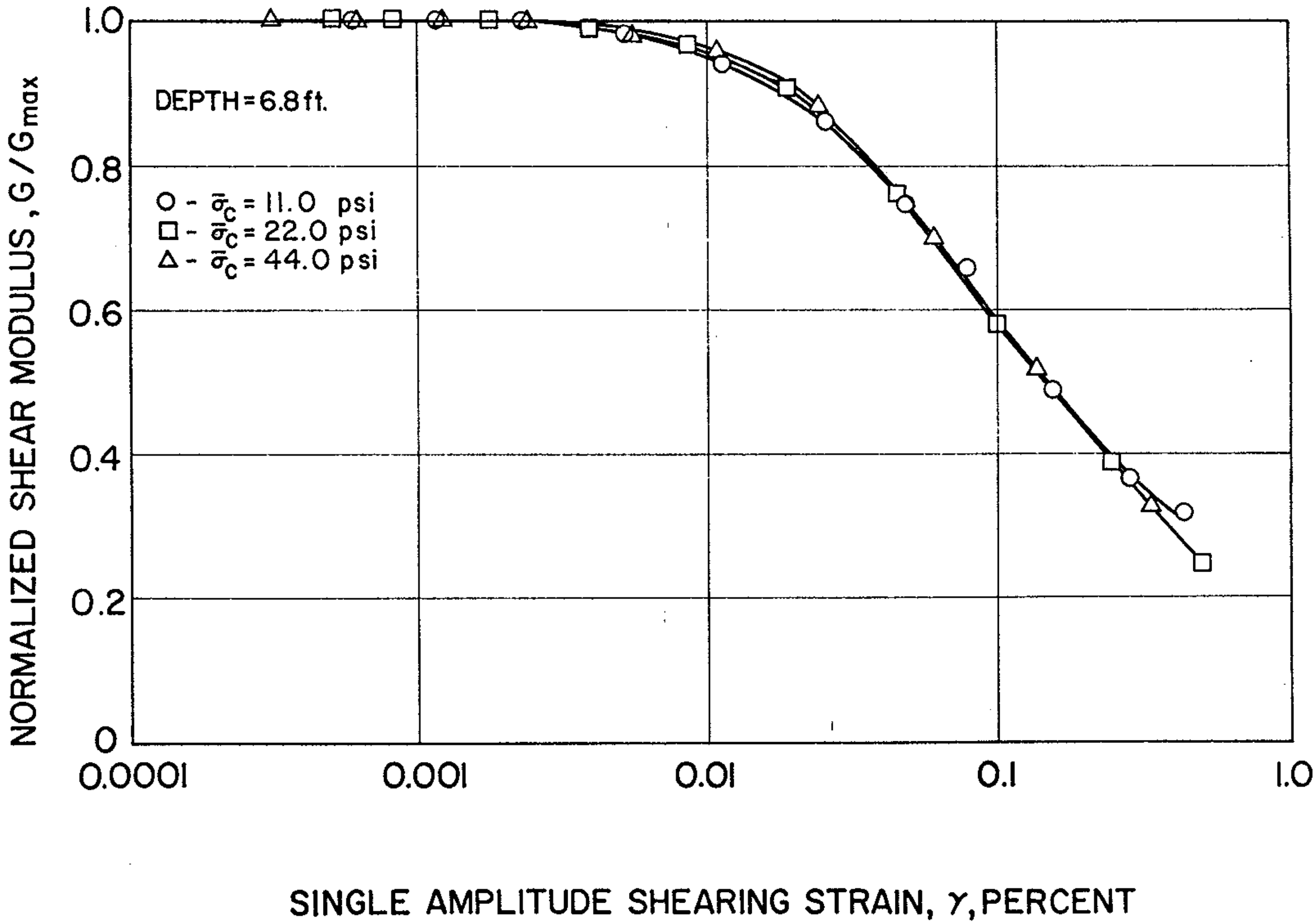


Fig. C.20. G/G_{max} vs. γ, 6.8 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

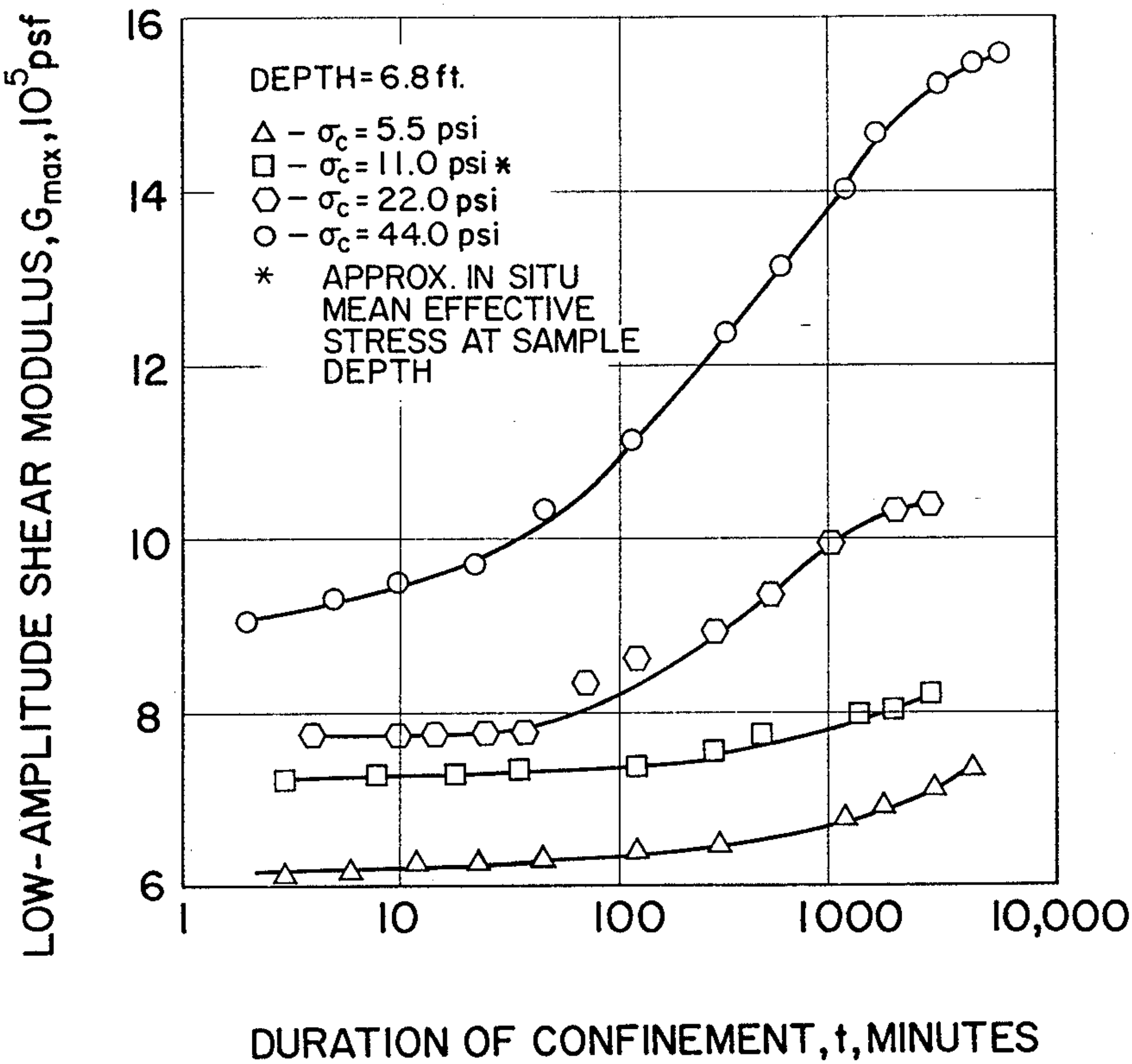


Fig. C.21. G_{max} vs. t, 6.8 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

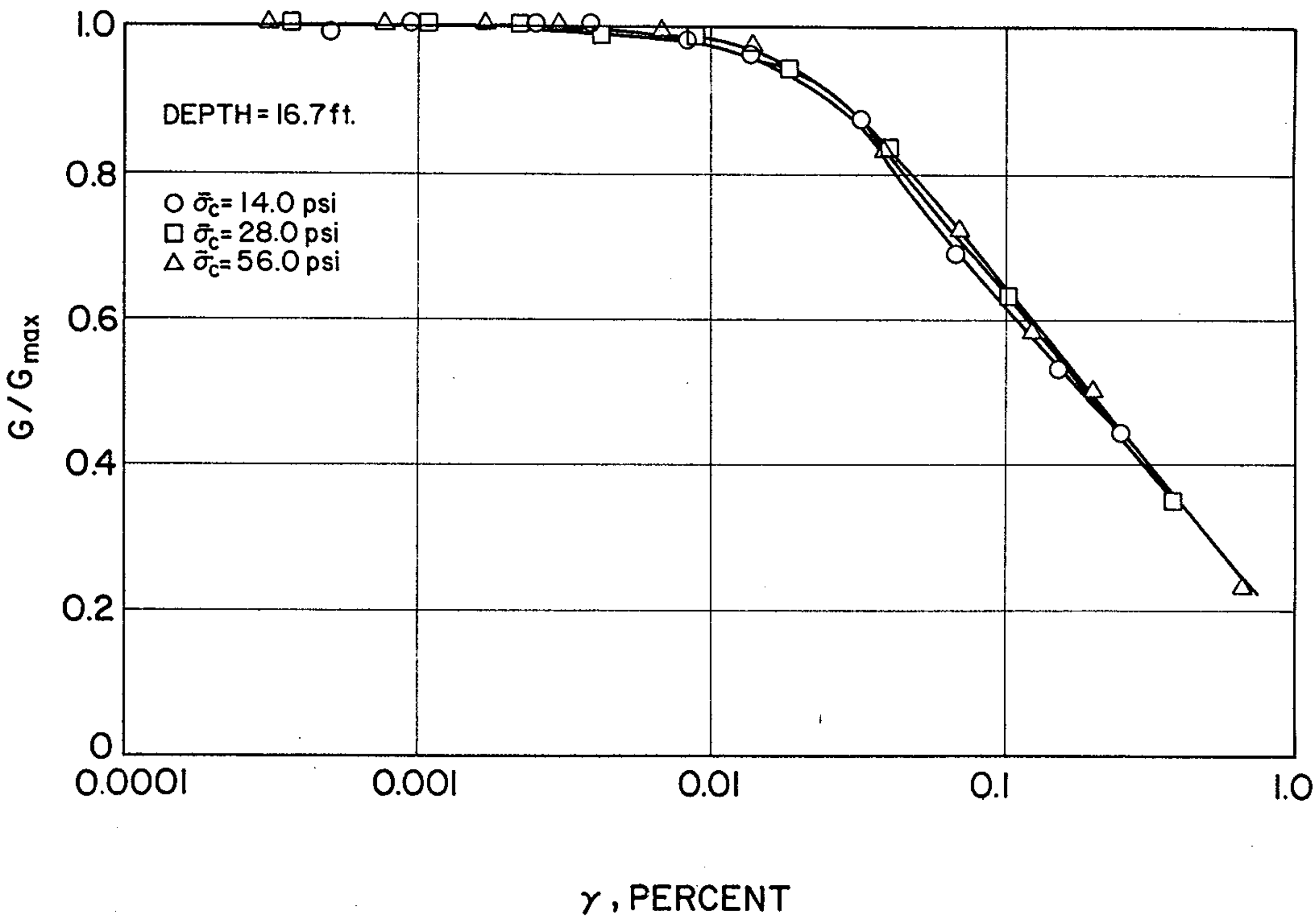


Fig. C.22. G/G_{max} vs. γ, 16.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

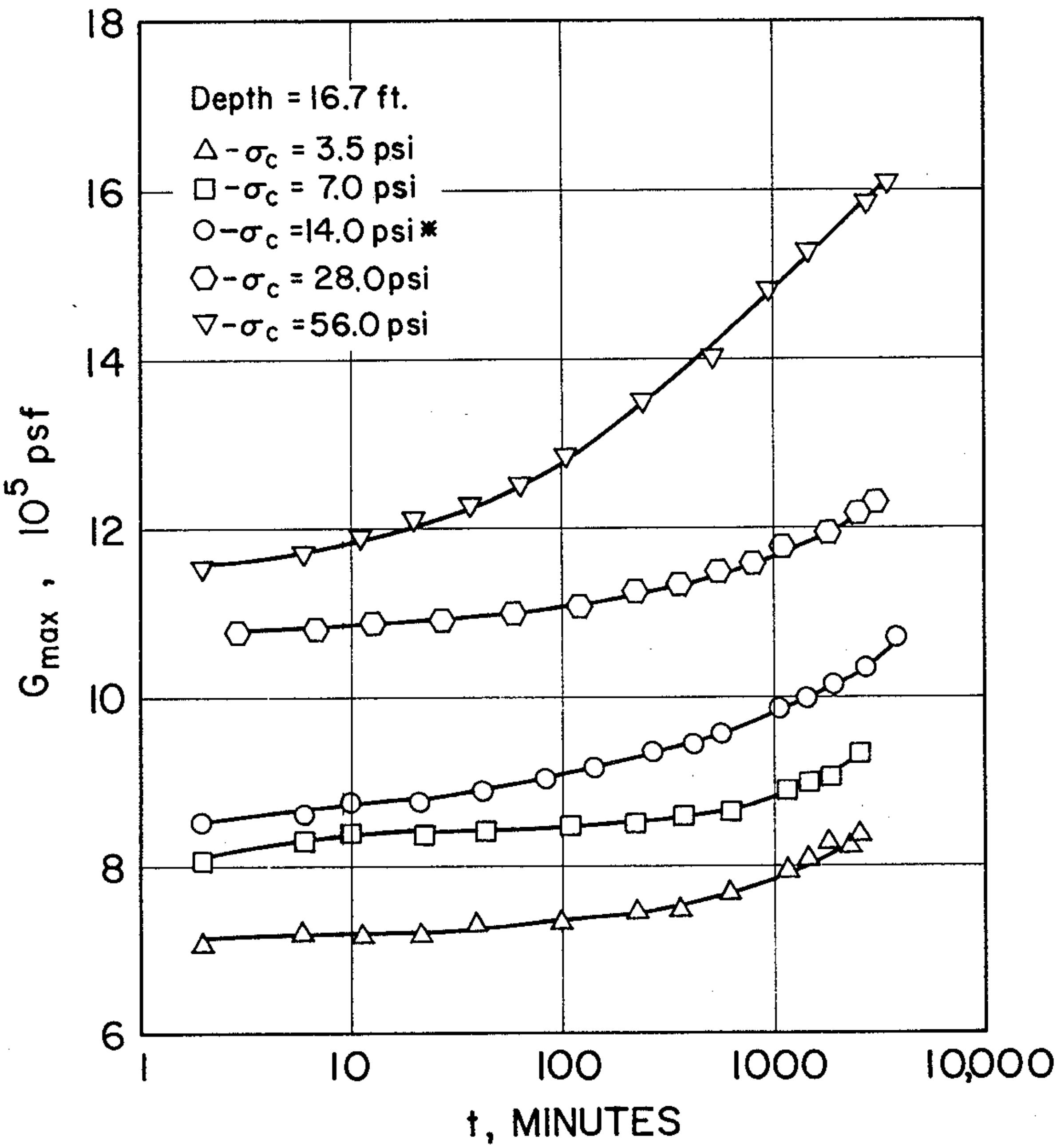


Fig. C.23. G_{max} vs. t, 16.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

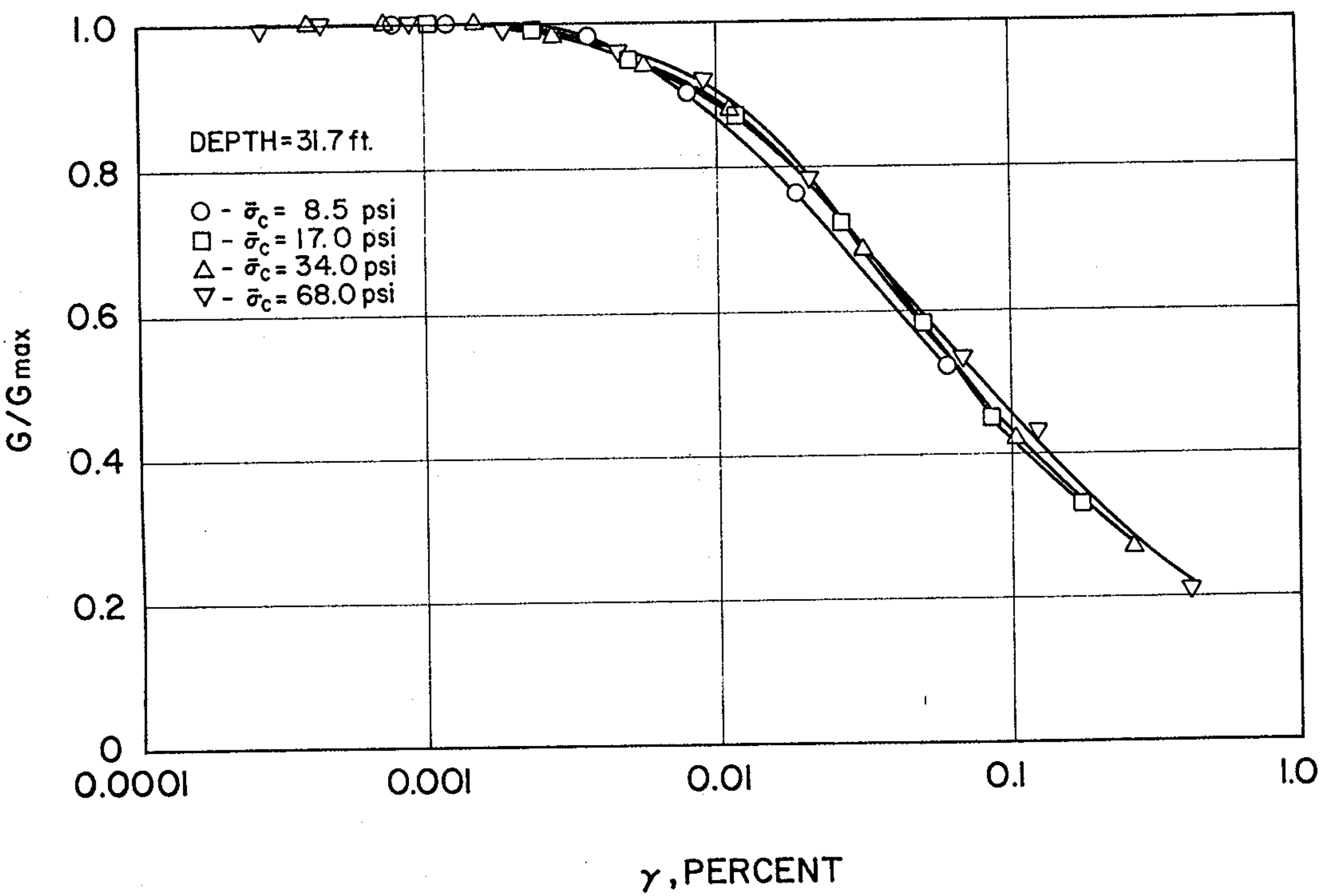


Fig. C.24. G/G_{max} vs. γ, 31.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

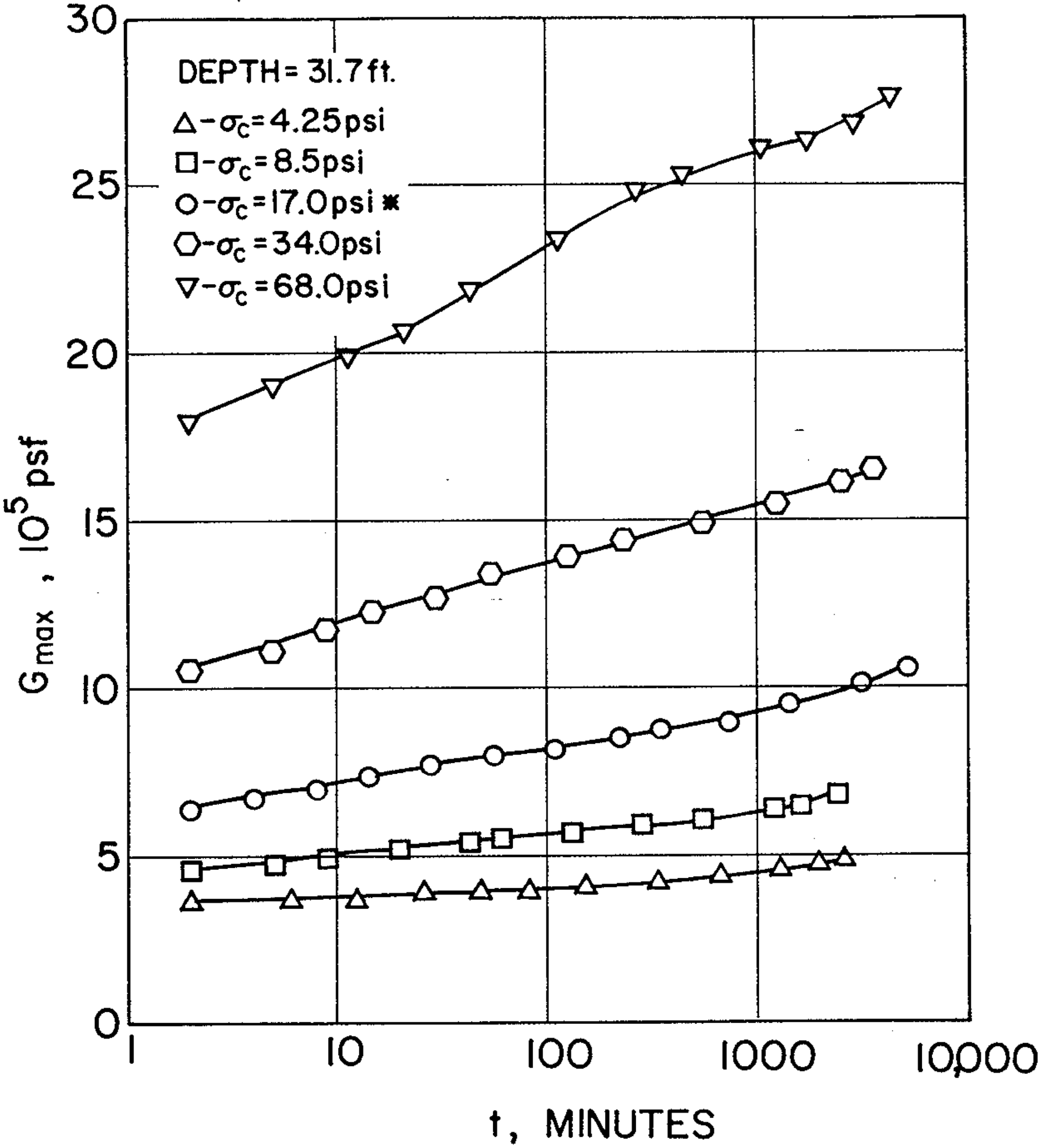


Fig. C.25. G_{max} vs. t, 31.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

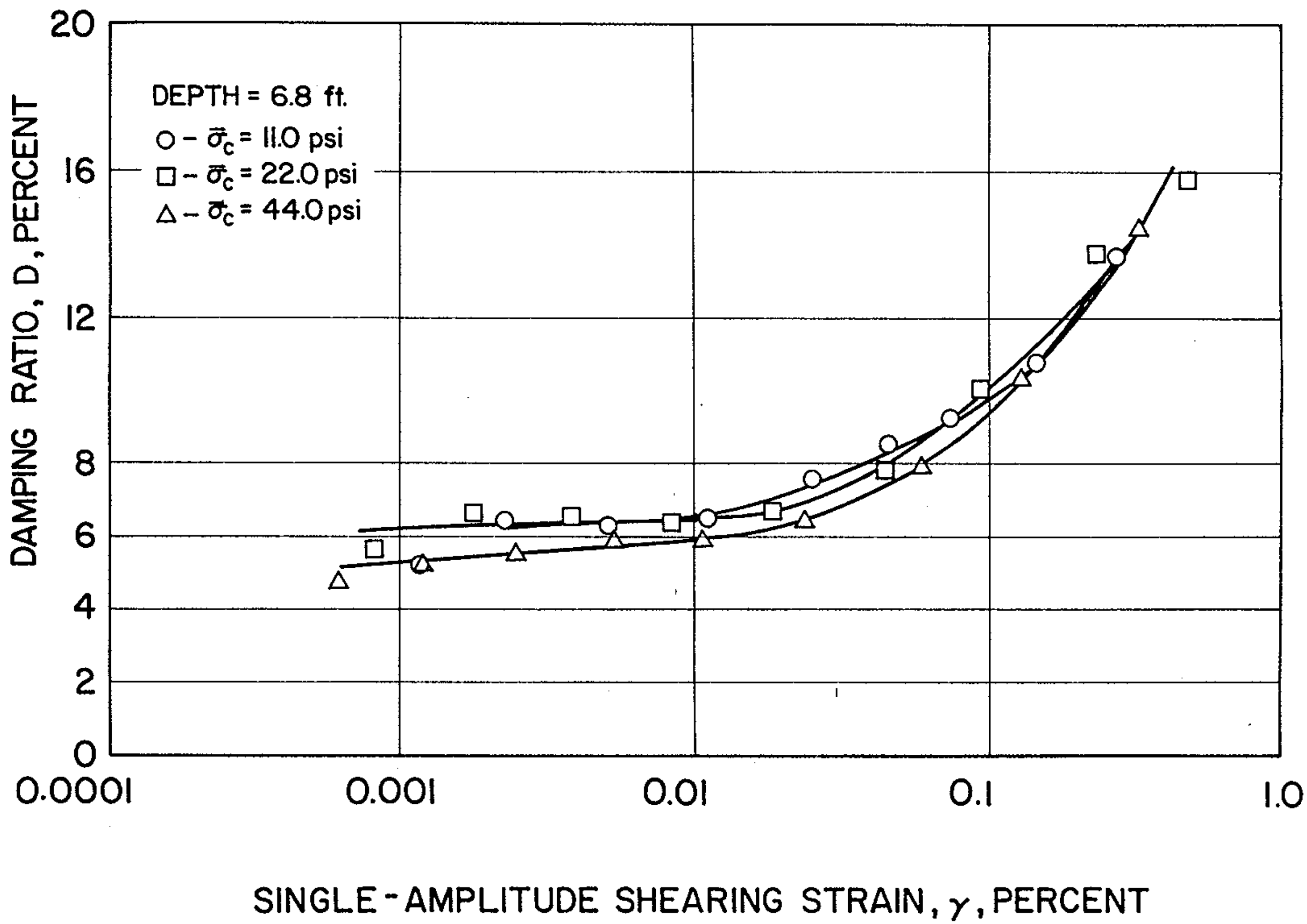


Fig. C.26. D vs. γ, 6.8 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

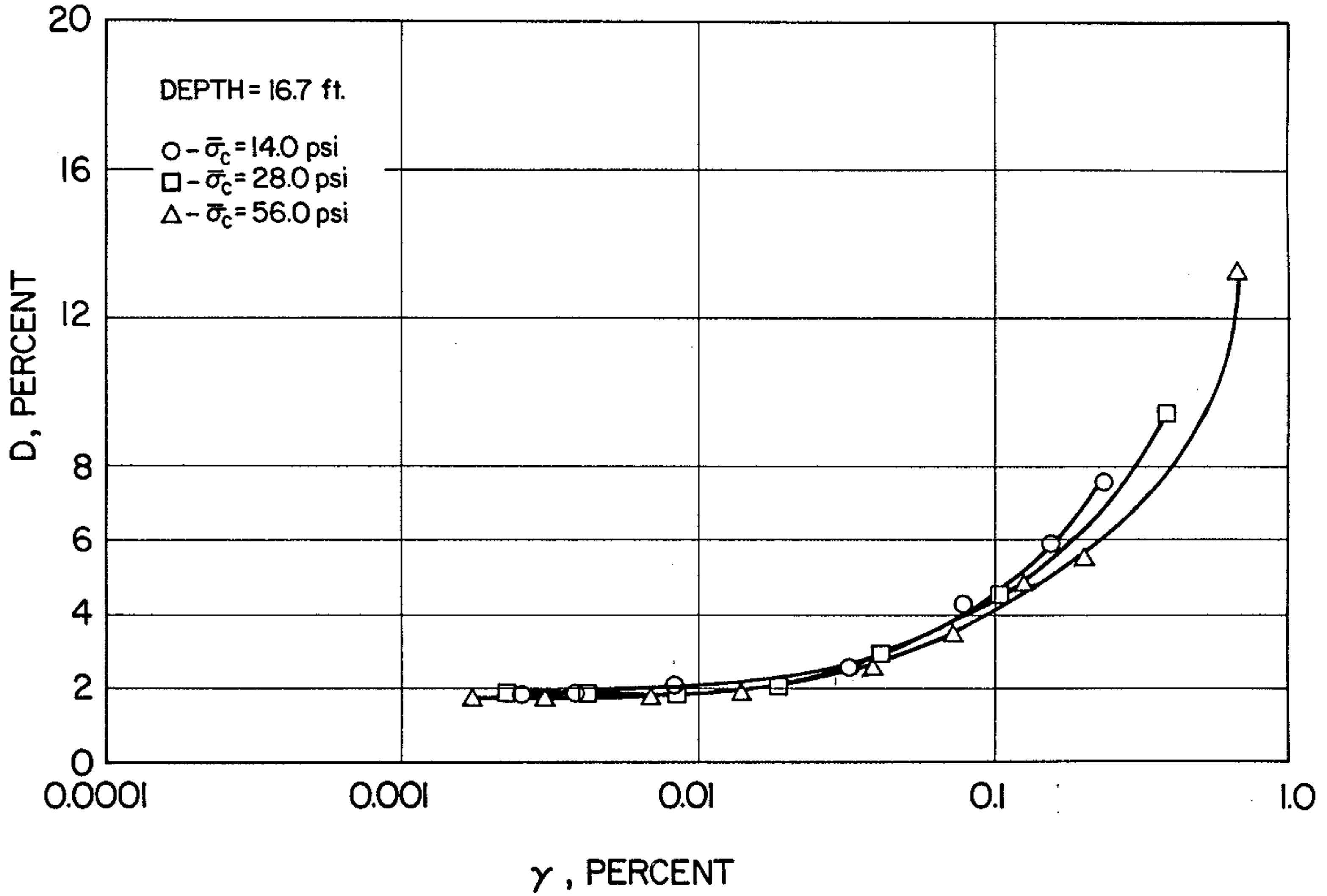


Fig. C.27. D vs. γ, 16.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

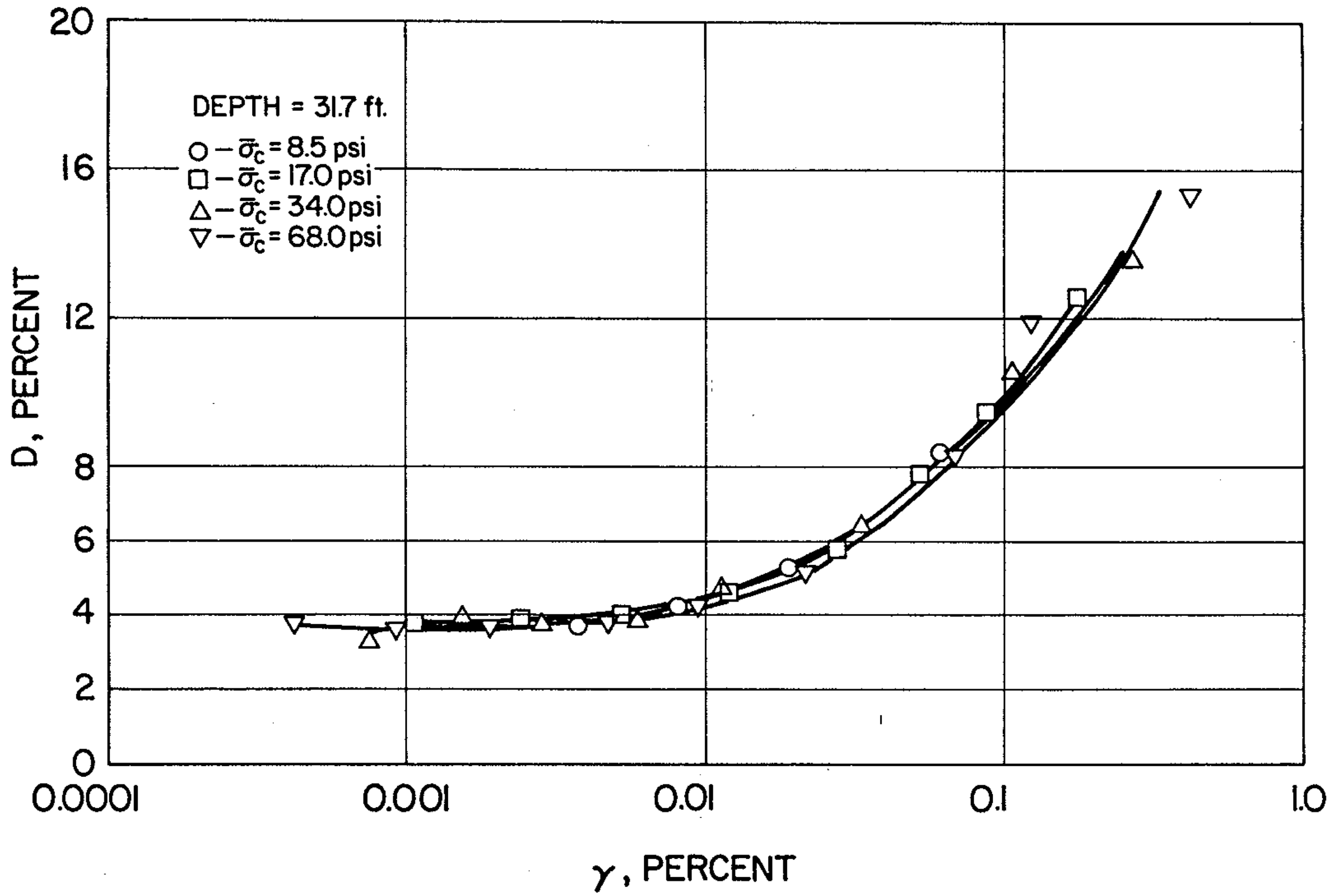


Fig. C.28. D vs. γ, 31.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

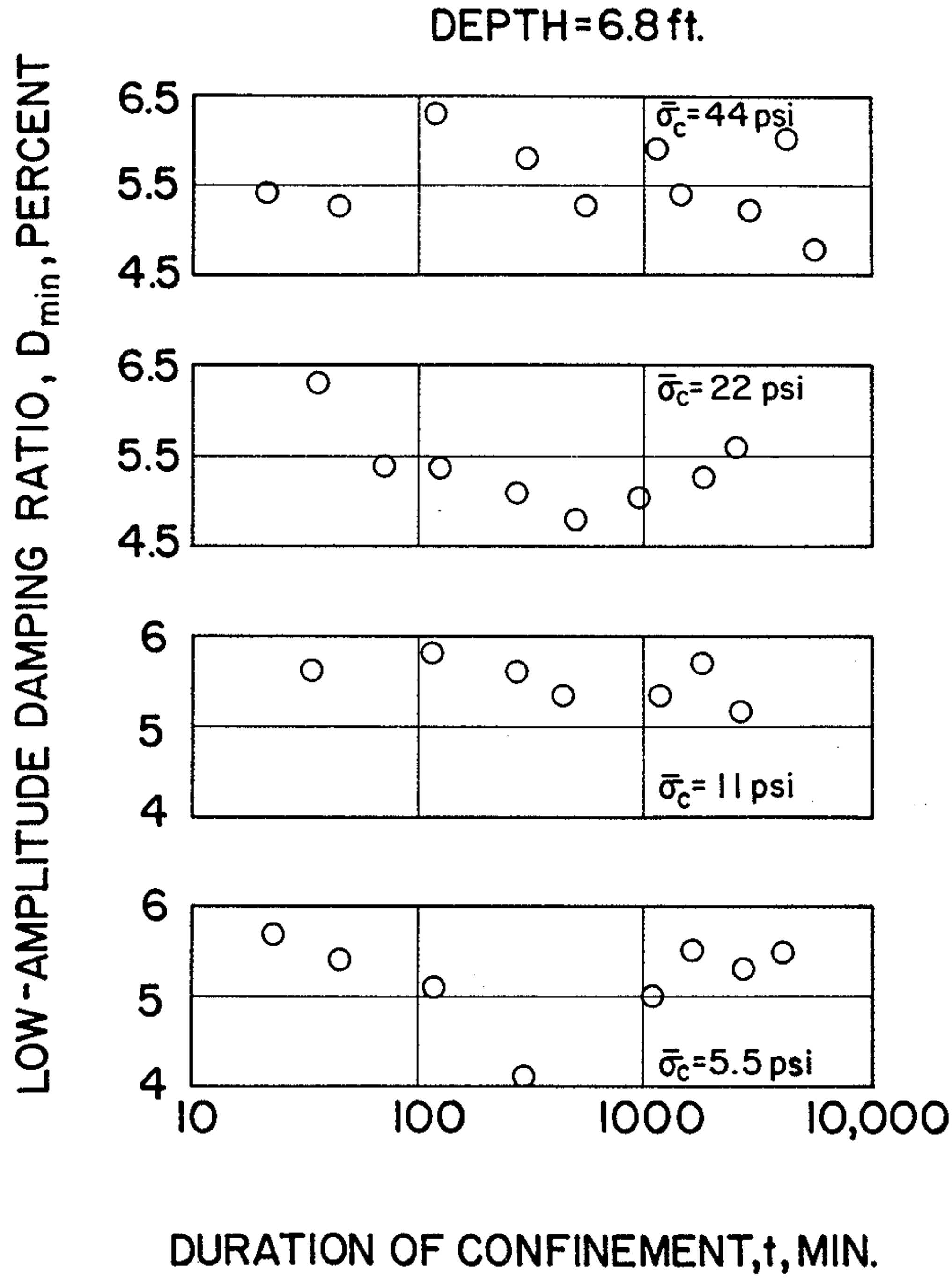


Fig. C.29. D_{min} vs. t, 6.8 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

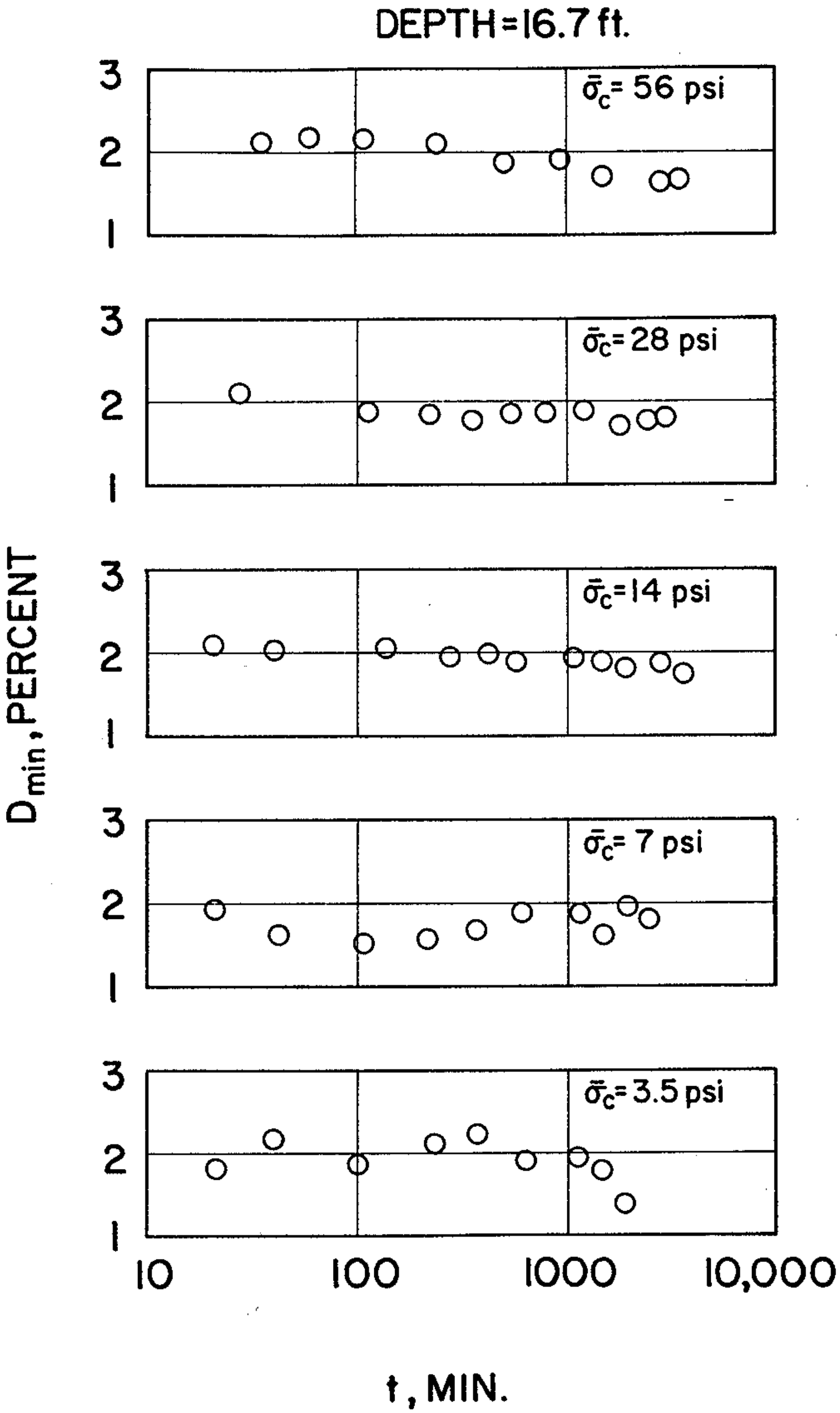


Fig. C.30. D_{min} vs. t, 16.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

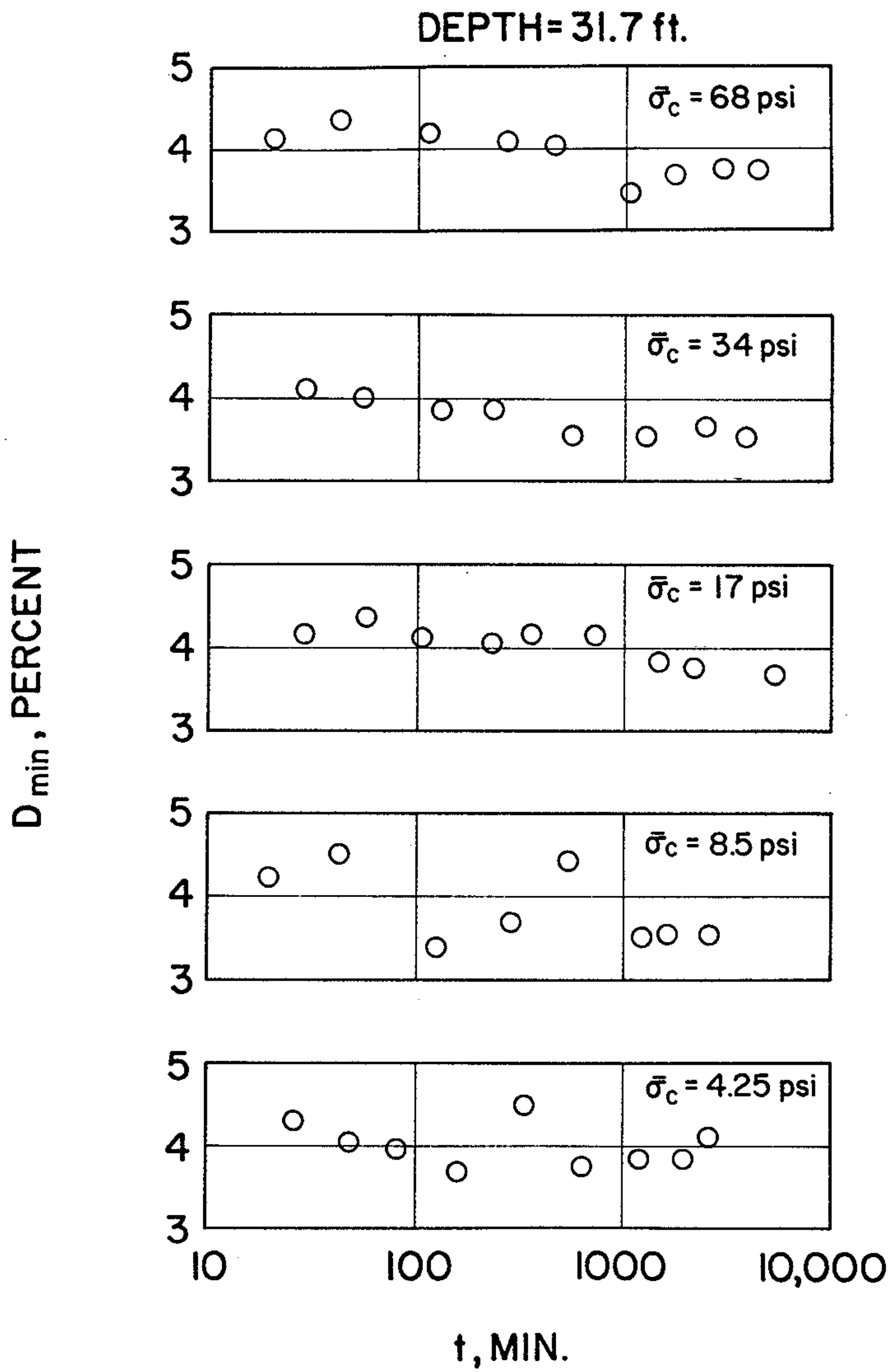


Fig. C.31. D_{min} vs. t, 31.7 Ft (1 ft = 0.305 m; 1 psi = 6.89 kPa).

APPENDIX D

Instrumentation Details

APPENDIX D
Instrumentation Details

This Appendix contains various notes pertaining to the calibration of the various instruments used in the field tests. Calibration factors for the strain gages are described in Ref. 63 and its appendices.

Table D.1. Calibration Factors for PCB Accelerometers.

PCB ACCELEROMETER CALIBRATION NOTES

ACCELEROMETER NUMBER	NAME	SERIAL NUMBER	POWER UNIT NUMBER	VOLTAGE SENSITIVITY @ 100Hz (Volts/g)	MAXIMUM TRANSVERSE SENSITIVITY	PACKAGE NUMBER
19	APO	5519	3786	.982	.7%	
20	APO	5529	3757	.984	1.2%	0
21	APO	5921	3788	.995	1.8%	
1	AP1H	5514	3781	1.007	2.6%	
2	AP1T	5430	3758	.982	.9%	1
3	AP1V	5575	3782	.997	1.5%	
4	AP2H	5438	3780	.980	2.3%	
5	AP2T	5516	3783	.987	3.9%	2
6	AP2V	5531	3759	.984	2.0%	
7	AP3H	5436	3779	.981	3.0%	
8	AP3T	5518	3785	.980	2.3%	3
9	AP3V	5520	3787	.988	2.5%	
10	AP4H	5517	3784	.980	1.6%	
11	AP4T	5523	3790	1.012	3.0%	4
12	AP4V	5522	3789	.991	3.9%	
13	AP5H	200	3755	1.233	1.1%	5
14	AP5V	198	3753	1.205	2.4%	
15	AP6H	196	3751	1.212	2.1%	6
16	AP6V	201	3756	1.210	1.7%	
17	AP7H	199	3754	1.171	1.0%	7
18	AP7V	197	3752	1.175	1.0%	

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ACCELEROMETERS 1-12 AND 19-21 ARE PCB #308B02,
RANGE ≠ 5g, MAX SHOCK = 100g, TC = .3 SEC

ACCELEROMETERS 13-18 ARE PCB #393B, RANGE = ± 2.5g
MAX SHOCK = 10g, TC = .2 SEC

Table D.2. Relative Acceleration and Phase vs. Frequency for PCB 308 Accelerometers.

FREQUENCY RESPONSE OF PCB 308 ACCELEROMETERS (R = 15500 OHMS)

H1-TRANSDUCER ROLLOFF; H2-PWR SUPPLY BOX ROLLOFF
H3 - SYSTEM ROLLOFF

HERTZ	H1	H2	H3	PHASE 1	PHASE 2	PHASE 3
0.00	0.0000	0.0000	0.0000	90.00	90.00	180.00
0.10	0.1852	0.0969	0.0180	79.33	84.44	163.76
0.20	0.3528	0.1912	0.0674	69.34	78.98	148.32
0.30	0.4922	0.2804	0.1380	60.51	73.71	134.23
0.40	0.6020	0.3630	0.2185	52.98	68.72	121.70
0.50	0.6859	0.4378	0.3003	46.70	64.04	110.73
0.60	0.7492	0.5045	0.3780	41.48	59.70	101.18
0.70	0.7970	0.5633	0.4489	37.16	55.72	92.87
0.80	0.8334	0.6146	0.5122	33.55	52.08	85.63
0.90	0.8615	0.6591	0.5678	30.52	48.77	79.28
1.00	0.8834	0.6977	0.6163	27.95	45.76	73.70
1.10	0.9007	0.7310	0.6584	25.75	43.03	68.78
1.20	0.9146	0.7598	0.6949	23.85	40.55	64.40
1.30	0.9259	0.7847	0.7266	22.20	38.30	60.50
1.40	0.9351	0.8064	0.7540	20.75	36.26	57.01
1.50	0.9428	0.8252	0.7780	19.48	34.39	53.87
1.60	0.9492	0.8416	0.7988	18.34	32.69	51.03
1.70	0.9546	0.8560	0.8171	17.33	31.13	48.46
1.80	0.9592	0.8686	0.8332	16.42	29.70	46.12
1.90	0.9632	0.8797	0.8473	15.60	28.39	43.99
2.00	0.9666	0.8896	0.8599	14.86	27.18	42.03
2.10	0.9695	0.8984	0.8710	14.18	26.06	40.23
2.20	0.9721	0.9062	0.8809	13.56	25.02	38.58
2.30	0.9744	0.9131	0.8898	12.99	24.06	37.05
2.40	0.9764	0.9194	0.8977	12.46	23.16	35.63
2.50	0.9782	0.9250	0.9049	11.98	22.33	34.31
2.60	0.9798	0.9301	0.9113	11.53	21.55	33.08
2.70	0.9812	0.9347	0.9172	11.12	20.82	31.94
2.80	0.9825	0.9389	0.9224	10.73	20.14	30.87
2.90	0.9837	0.9427	0.9273	10.37	19.50	29.86
3.00	0.9847	0.9461	0.9317	10.03	18.89	28.92
3.10	0.9857	0.9493	0.9357	9.71	18.33	28.04
3.20	0.9865	0.9522	0.9394	9.41	17.79	27.20
3.30	0.9873	0.9548	0.9427	9.13	17.28	26.42
3.40	0.9880	0.9573	0.9459	8.87	16.80	25.67
3.50	0.9887	0.9596	0.9487	8.62	16.35	24.97
3.60	0.9893	0.9616	0.9514	8.38	15.92	24.30
3.70	0.9899	0.9636	0.9538	8.16	15.51	23.67
3.80	0.9904	0.9654	0.9561	7.95	15.12	23.07
3.90	0.9909	0.9670	0.9582	7.75	14.75	22.50
4.00	0.9913	0.9686	0.9602	7.55	14.40	21.95

FREQUENCY RESPONSE OF PCB 308 ACCELEROMETERS (CONT'D)

HERTZ	H1	H2	H3	PHASE 1	PHASE 2	PHASE 3
4.50	0.9931	0.9749	0.9682	6.72	12.85	19.58
5.00	0.9944	0.9796	0.9741	6.06	11.60	17.66
5.50	0.9954	0.9830	0.9785	5.51	10.57	16.08
6.00	0.9961	0.9857	0.9818	5.05	9.71	14.76
6.50	0.9967	0.9878	0.9845	4.67	8.98	13.64
7.00	0.9971	0.9894	0.9866	4.33	8.35	12.68
7.50	0.9975	0.9908	0.9883	4.05	7.80	11.84
8.00	0.9978	0.9919	0.9897	3.79	7.31	11.11
8.50	0.9981	0.9928	0.9909	3.57	6.89	10.46
9.00	0.9983	0.9936	0.9918	3.37	6.51	9.88
9.50	0.9984	0.9942	0.9927	3.20	6.17	9.37
10.00	0.9986	0.9948	0.9934	3.04	5.86	8.90
12.00	0.9990	0.9964	0.9954	2.53	4.89	7.42
14.00	0.9993	0.9973	0.9966	2.17	4.19	6.36
16.00	0.9995	0.9979	0.9974	1.90	3.67	5.57
18.00	0.9996	0.9984	0.9979	1.69	3.26	4.95
20.00	0.9996	0.9987	0.9983	1.52	2.94	4.46
22.00	0.9997	0.9989	0.9986	1.38	2.67	4.05
24.00	0.9998	0.9991	0.9988	1.27	2.45	3.72
26.00	0.9998	0.9992	0.9990	1.17	2.26	3.43
28.00	0.9998	0.9993	0.9991	1.09	2.10	3.19
30.00	0.9998	0.9994	0.9993	1.01	1.96	2.97
32.00	0.9999	0.9995	0.9993	0.95	1.84	2.79
34.00	0.9999	0.9995	0.9994	0.89	1.73	2.62
36.00	0.9999	0.9996	0.9995	0.84	1.63	2.48
38.00	0.9999	0.9996	0.9995	0.80	1.55	2.35
40.00	0.9999	0.9997	0.9996	0.76	1.47	2.23
60.00	1.0000	0.9999	0.9998	0.51	0.98	1.49
80.00	1.0000	0.9999	0.9999	0.38	0.74	1.12
100.00	1.0000	0.9999	0.9999	0.30	0.59	0.89
120.00	1.0000	1.0000	1.0000	0.25	0.49	0.74
140.00	1.0000	1.0000	1.0000	0.22	0.42	0.64
160.00	1.0000	1.0000	1.0000	0.19	0.37	0.56
180.00	1.0000	1.0000	1.0000	0.17	0.33	0.50
200.00	1.0000	1.0000	1.0000	0.15	0.29	0.45
220.00	1.0000	1.0000	1.0000	0.14	0.27	0.41
240.00	1.0000	1.0000	1.0000	0.13	0.25	0.37

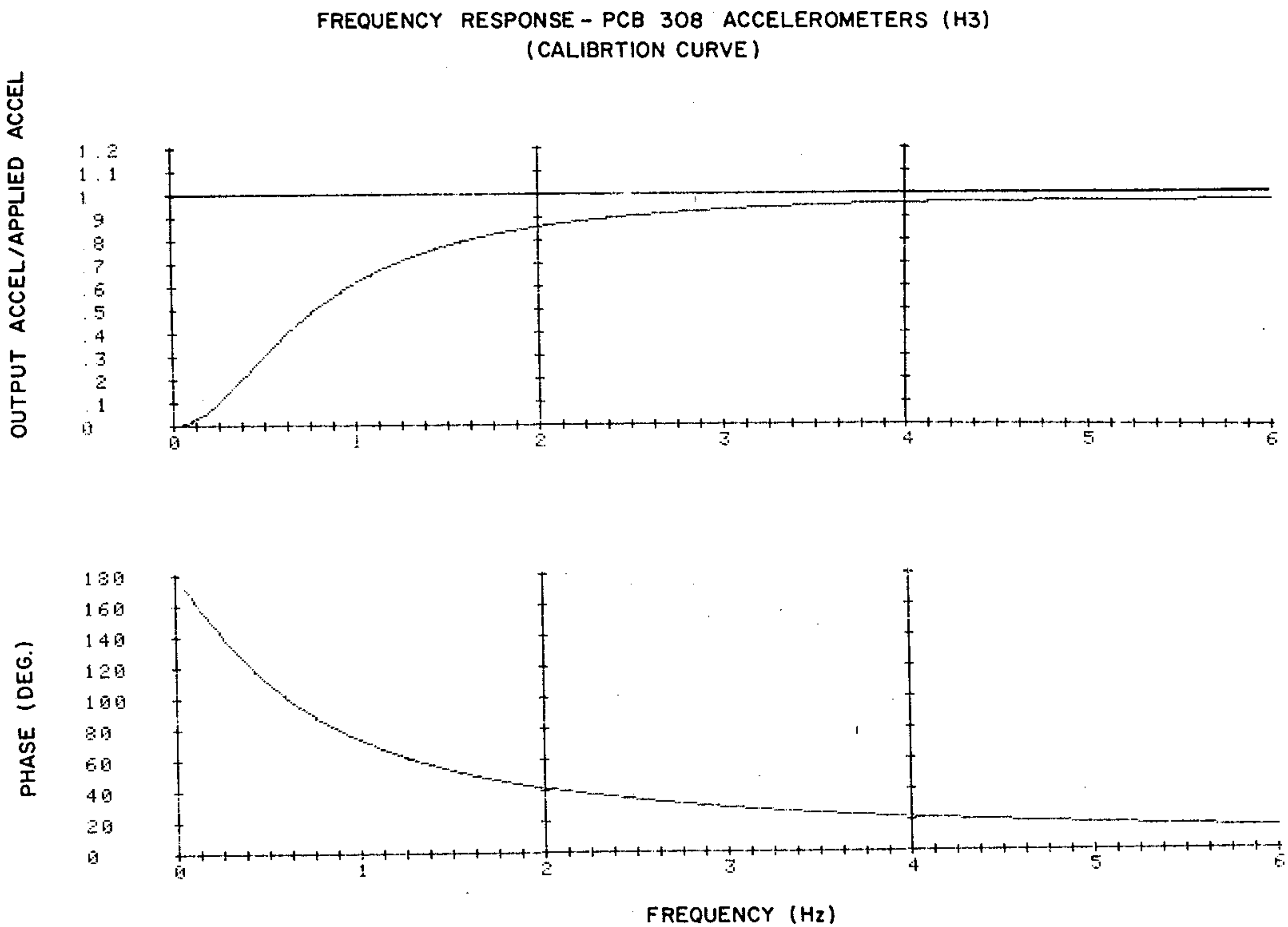

Fig. D.1. Relative Acceleration and Phase vs. Frequency for PCB 308 Accelerometers (Graphical).

Table D.3. Variation of Sensitivity Among PCB 308 Accelerometers.

PCB MODEL #308B02 ACCELEROMETER FREQUENCY RESPONSE
DEVIATION FROM SENSITIVITY @ 100HZ

ACCELEROMETER NUMBER	10HZ	30HZ	50HZ	100HZ	200HZ*	300HZ
19	-.7%	-.6%	-.5%	0.0	+.1%	+.2%
20	-.3%	-.4%	-.5%	0.0	+.05%	+.1%
21	-.4%	-.5%	-.7%	0.0	-.1%	-.2%
1	-.8%	-.7%	-.5%	0.0	+.1%	+.2%
2	-.5%	-.4%	-.4%	0.0	+.15%	+.3%
3	-.4%	-.6%	-.8%	0.0	+.15%	+.3%
4	-.9%	-.6%	-.0%	0.0	+.15%	+.3%
5	-1.0%	-.7%	-.2%	0.0	+.15%	+.3%
6	-.2%	-.2%	-.3%	0.0	+.05%	+.1%
7	-.3%	-.4%	-.5%	0.0	+.10	+.20%
8	0.0%	-.1%	-.3%	0.0	+.1%	+.20%
9	-.3%	-.5%	-.8%	0.0	+.05%	.1%
10	-1.3%	-.6%	0.0%	0.0	+.15%	+.3%
11	-.5%	-.4%	-.4%	0.0	+.05%	+.1%
12	-.3%	-.4%	-.7%	0.0	+.10	+.20%

* INTERPOLATED BETWEEN 100HZ AND 300HZ

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Table D.4. Calibration Factors for HS-10 Geophones.

Summary of Geo-Space HS-10-1

Geophone Calibration by G Muster

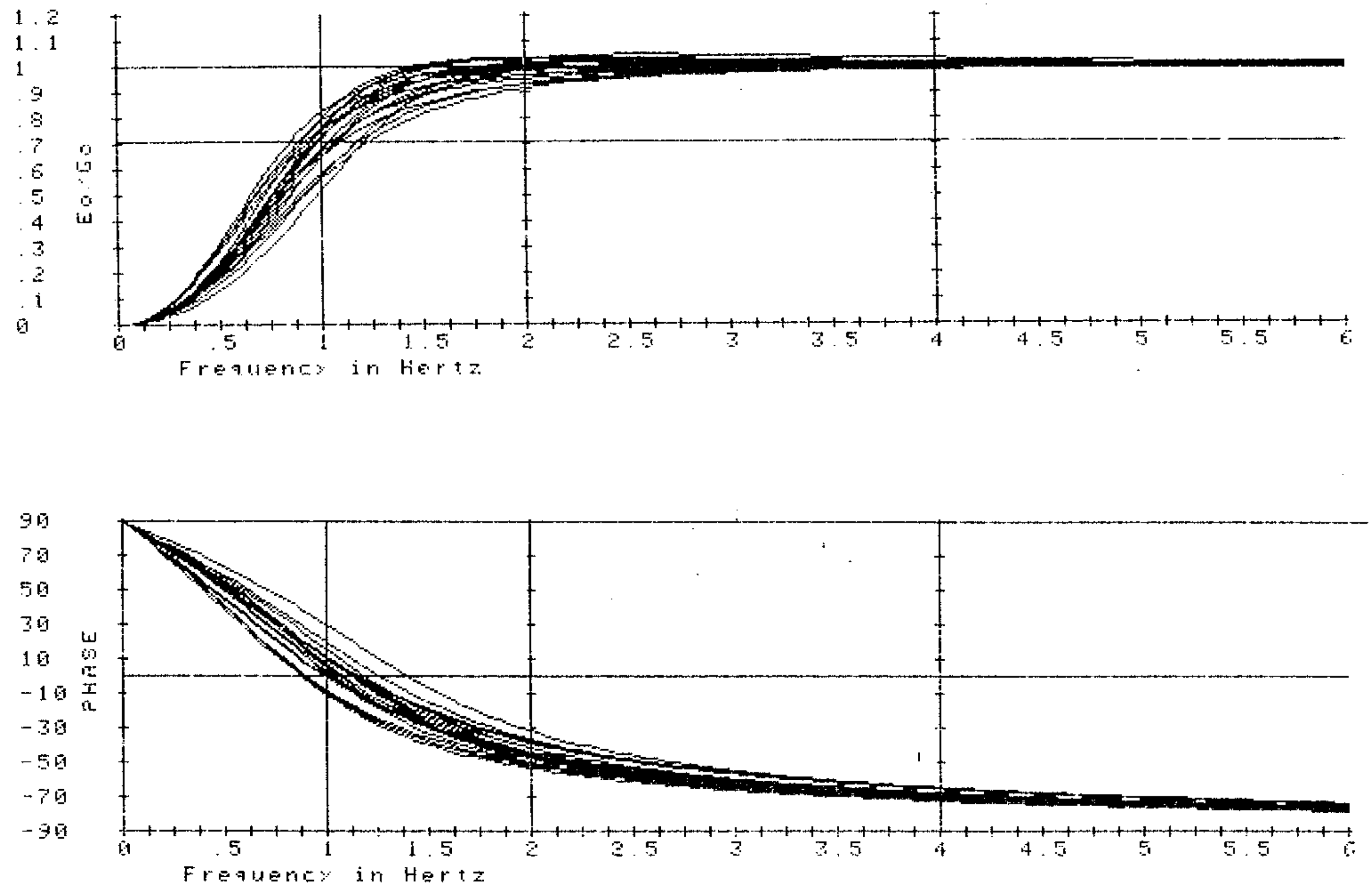
#	SERIAL #	R	B0	B0*Req	F0 [HZ]	[V/(MM/SEC)]	[V/(IN/SEC)]
1	59710.	4200	.2624	10502.0	1.0784	0.36770	9.3396
2	59711.	4160.	.2845	11672.0	0.8944	0.35302	8.9667
3	59703.	3951.	.2768	11566.0	1.0678	0.38397	9.7528
4	59708.	4067.	.2892	13463.0	0.9958	0.40005	10.1613
5	59707.	4044.	.2407	10216.0	1.0814	0.36317	9.2245
6	59702.	3900.	.2223	7595.2	1.0186	0.30390	7.7191
7	42608.	3850.	.3233	9452.4	1.1420	0.35897	9.1178
8	42607.	3925.	.2296	10084.0	1.1614	0.37391	9.4973
9	59701.	3980.	.2336	8691.4	0.8772	0.30169	7.6629
10	56925.	4123.	.2958	10348.0	1.0292	0.35655	9.0564
11	42609.	3998.	.2722	9561.5	1.0595	0.34776	8.8331
12	59404.	3895.	.2442	7343.8	1.1895	0.32292	8.2022
13	59713.	3938.	.2804	10014.0	1.1283	0.36728	9.3289
14	59712.	4137.	.2739	10949.0	1.0372	0.36819	9.3520
15	36028.	3840.	.3381	10851.0	0.8761	0.33687	8.5565
16	16288.	4009.	.2287	9747.8	1.1497	0.36577	9.2906
17	16291.	3956.	.2496	10073.0	1.1168	0.36645	9.3078
18	59700.	4012.	.2694	12685.0	1.0047	0.39006	9.9075
19	16294.	3990.	.1852	7958.4	1.3999	0.36469	9.2631
20	16293.	4042.	.2147	8495.9	1.2637	0.35800	9.0932
21	16297.	3919	.3241	14001.0	0.9067	0.38931	9.8885
22	0.	0.	0.0000	0.0	0.0000	0.00000	0.0000
23	0.	0.	0.0000	0.0	0.0000	0.00000	0.0000
24	56928.	3840.	.1911	8390.3	1.4188	0.37698	9.5753

R- COIL RESISTANCE

BO- OPEN CIRCUIT DAMPING

FO- NATURAL FREQUENCY

V/VELOCITY - CALIBRATION CONST. ABOVE 2Hz±.



E_o - OUTPUT
G_o - OUTPUT @ FREQ >> 1Hz

Fig. D.2. Output and Phase vs. Frequency for HS-10 Geophones (Graphical).

Table D.5. Results of Typical Geophone Calibration.

TYPICAL CALIBRATION

GEOPHONE NUMBER..... 1
GEOPHONE NAME... ...VP9H
SERIAL NUMBER. . . 59710
COIL RESISTANCE(r).. 4200
MOVING MASS(GRAMS).. 950

LINEAR REGRESION OF 1/(R+r) & B

R SQUARE = 0.995

B = 0.2624 + 10502.268/(R+r)

1/(R+r)	B(I)	B	RESIDUALS
1.0409E-005	0.3739	0.3717	0.0022
1.0409E-005	0.3693	0.3717	-0.0024
1.0409E-005	0.3579	0.3717	-0.0138
1.4638E-005	0.4087	0.4161	-0.0074
1.4638E-005	0.4189	0.4161	0.0028
1.4638E-005	0.4189	0.4161	0.0028
1.8532E-005	0.4652	0.4570	0.0082
1.8532E-005	0.4547	0.4570	-0.0024
1.8532E-005	0.4637	0.4570	0.0067
2.7882E-005	0.5673	0.5552	0.0121
2.7882E-005	0.5624	0.5552	0.0072
2.7882E-005	0.5573	0.5552	0.0021
3.6329E-005	0.6397	0.6439	-0.0043
3.6329E-005	0.6406	0.6439	-0.0033
3.6329E-005	0.6335	0.6439	-0.0104

IF B=.7071 R = 19415.7 OHMS

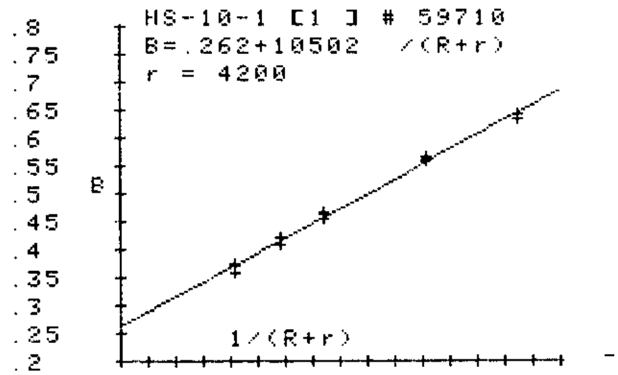
G0 = 0.3677 V/(MM/SEC)
G0 = 9.3397 V/(IN/SEC)
F0 = 1.0784 HERTZ

B	(R+r)	(B-B0)*(R+r)
.3739	96068.0	10713.0
.3693	96068.0	10271.0
.3579	96068.0	9172.0
.4087	68317.0	9997.1
.4189	68317.0	10695.0
.4189	68317.0	10695.0
.4652	53962.0	10944.0
.4547	53962.0	10376.0
.4637	53962.0	10862.0
.5673	35866.0	10935.0
.5624	35866.0	10759.0
.5573	35866.0	10576.0
.6397	27526.0	10385.0
.6406	27526.0	10411.0
.6335	27526.0	10216.0
AVE (B-B0)*(R+r) =		10467.1

G0 = 0.3671 V/(MM/SEC)
G0 = 9.3240 V/(IN/SEC)
F0 = 1.0784 HERTZ

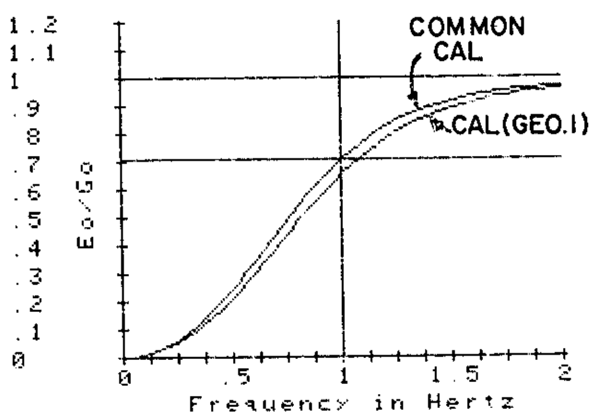
Table D.5. Cont'd.

TYPICAL CALIBRATION (CONT'D)



XMIN=0 TICS=.0000025

```
GEOPHONE NUMBER..... 1
SERIAL NUMBER....... 59710
DAMPING(% CRITICAL). 70.71
FOR LOAD R(OHMS).... 19415
NATURAL FREQ(HERTZ). 1.0784
```



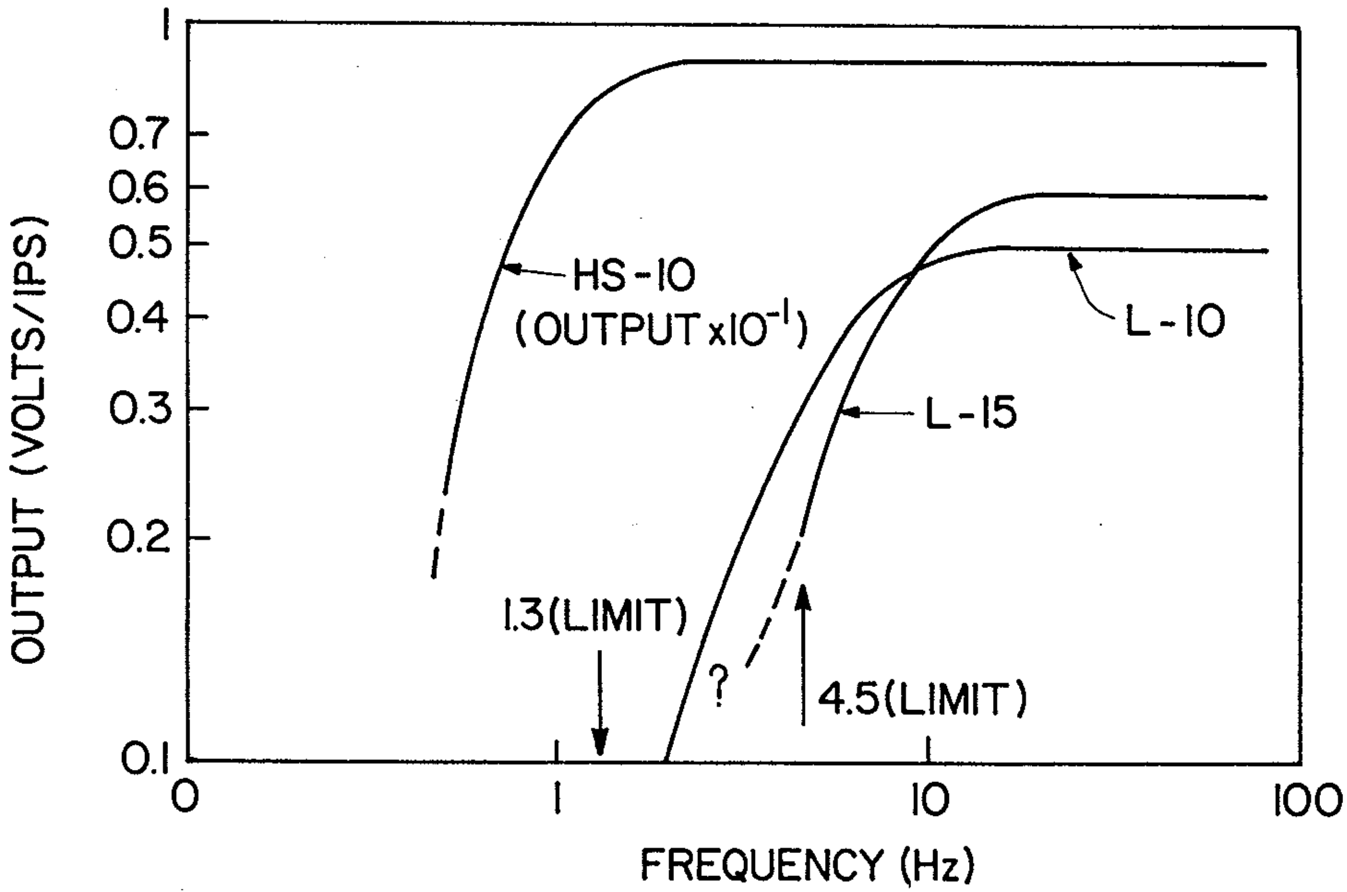


Fig. D.3. ROLLOVER CALIBRATIONS FOR HS-10, L-10, AND L-15 GEOPHONES WITH DAMPING (ELECTRICAL) USED FOR PROJECT

Table D.6. Errors in Binary Gain Amplifiers in DFS3 Seismic Recording Truck Relative to Operating Frequency of 36 Hz.

DFS3 SEISMIC RECORDING TRUCK DYNAMIC RESPONSE

THE TRANSFER FUNCTION FOR THE BINARY GAIN AMPLIFIERS AFTER THE INDIVIDUAL GAIN CONSTANTS (@ 36 Hz) ARE APPLIED MAY BE APPROXIMATED, FOR ALL CHANNELS, BY THE FOLLOWING TRANSFER FUNCTION.

HERTZ	BGA TRANSFER FUNCTION	ERROR	BOUNDS %
1	.41889	+1.59	-2.37
2	.68102	+ .84	-1.38
5	.913865	+ .95	- .67
8	.96704	+ .36	- .19
10	.981385	+ .23	- .23
12	.98944	+ .27	- .22
20	1.001072	+ .10	- .15
36	1.00000	.0	.0
50	.99517	+ .19	- .17
80	.98506	+ .60	- .60
100	.98379	+1.11	-1.12
125	.953195	+4.59	-4.65
150	.92885	+1.99	-1.31
175	.93674	+3.5	-1.21
190	.88689	+4.09	-2.11
200	.83171	+6.11	-5.05

RESULTS OF FIELD RECORDS 111-126 AND 168-178.

Table D.7. Gain Constants Used in BGA's for Individual Channels in DFS3 Seismic Recording Truck.

DFS3 SEISMIC RECORDING TRUCK GAIN CONSTANTS AT 36 HERTZ

DESIRED GAIN CONSTANT = 1.0000

CHANNEL	GAIN CONSTANT	CHANNEL	GAIN CONSTANT
1	.99003	25	1.03088
2	.88252	26	1.06088
3	.99277	27	1.03113
4	.99277	28	2.00375
5	1.9863	29	1.05163
6	.99103	30	1.11214-
7	.99378	31	0.98889
8	.99128	32	1.02012
9	.99252	33	1.02280
10	.93550	34	1.03130
11	.98854	35	1.01588
12	.94820	36	1.03213
13	1.00627	37	1.01000
14	.966404	38	1.00363
15	.99949	39	1.01313
16	.96940	40	1.01838
17	.99573	41	1.01713
18	1.00050	42	1.00988
19	.97844	43	1.01413
20	1.0584	44	1.01663
21	1.00827	45	0.95261
22	1.00827	46	1.04013
23	1.00802	47	0.00436
24	1.00050	48	1.03588

CHANNELS 1-12 FROM FIELD RECORD # 232

CHANNELS 13-24 FROM FIELD RECORD # 180

CHANNELS 25-33, 36-48 FROM FIELD RECORD # 213

Table D.8. Specifications for Converter/Multiplexer Module.

SPECIFICATIONS

The Converter/Multiplexer Module contains hardware for converting multichannel analog data to digital data, digital data to multichannel analog data, and the galvanometer drive.

The basic module contains a 32-channel multiplexer, a 32-channel demultiplexer, a 15-bit analog-to-digital/digital-to-analog converter, 32 hold amplifiers, 32 playback filters, and 32 galvanometer drive circuits. It has provisions for adding an 11-bit digital-to-analog converter for read-after-write applications, an up-down gain-change indicator, and an alias filter for the time-break to be recorded on an auxiliary channel.

SPECIFICATIONS

Item	Description
Input	
Frequency Response	
Seismic Channels	3 to 248 Hz set by amplifiers
Auxiliary Channels	1 Hz to 1/2 sampling frequency. Source must provide a dc return of not more than 5000 ohms and dc offset less than 30 microvolts.
Output Impedance	Less than 20 ohms in series with 330 microfarads
Multiplexer	
Type Input	Single-ended
Number of Switches	32
Maximum Input Voltage	±10 volts
Leakage Current	1 nanoampere maximum per switch at +25°C
Switch Impedance	
Off	100 megohms minimum shunted by 20 picofarads
On	70 ohms maximum

Table D.8. Cont'd.

SPECIFICATIONS

Item	Description
Multiplexer (continued)	
Linearity	±0.005% of full-scale departure from best straight line of input versus output
Offset voltage	50 microvolts maximum at 25°C 200 microvolts maximum 0-55°C
Crossfeed Isolation	
Record	84 decibels minimum
Playback	52 decibels minimum
Dynamic Range	
Record	84 decibels minimum
Playback	52 decibels minimum
Converter	
Number of Bits	15 including sign (full scale = ±4.09575 volts)(smallest signal = +0.25 millivolt)
Number System	Binary one's complement. A simple wire change provides two's complement. (See Appendix B for number-system conversion.)
Accuracy	±0.05% of full scale
Linearity	±0.02% of full scale maximum departure from best straight line of input versus output.
Dynamic Range	
Record	78 decibels minimum measured on peaks 80 decibels minimum rms measurement
Playback	52 decibels minimum 46 decibels minimum in a read-after-write system Bit slide up to 72 decibels playback gain increase

Table D.8. Cont'd.

SPECIFICATIONS

Item	Description	
Playback Filter		
*Cutoff		
1 millisecond sampling	248 Hz	*Switched to 1, 2, or 4 milliseconds by means of a switch on the card. 8-millisecond option by changing cards.
2 millisecond sampling	124 Hz	
4 millisecond sampling	62 Hz	
8 millisecond sampling (option)	31 Hz	
Slope	18 decibels/octave	
Distortion	0.5% maximum for frequencies less than 0.2 of the sampling frequency	
Distortion and Ripple	1% maximum for frequencies less than 0.2 of the sampling frequency	
Galvo Attenuators		
Maximum Deflection		
200-Hz Galvo	9 inches peak to peak	
500-Hz Galvo	2 inches peak to peak	
Range of Deflection	33 decibels in 3-decibel steps	

APPENDIX E

Typical DRIVE, SPASM, and DCASS 5 Output

APPENDIX E
Typical DRIVE, SPASM and DCASS5 Outputs

This appendix presents typical representative plots obtained from the computer analyses for which plot routines were developed. Both well-behaved and problematical results for DRIVE and SPASM are shown. DCASS5 results include typical time-instrument response histories, power spectral density functions, transfer functions, coherence, and phase for several instruments in the single-vertical, group-vertical, single-horizontal, and group-horizontal tests.

DRIVE AND SPASM OUTPUT PLOTS

The following are plots of selected output from DRIVE and SPASM. They are self-explanitory. The term "reaction force" is the total soil force that resists movement at the indicated station. Station numbers are identified relative to depth in Chapter 6 of the main report text.

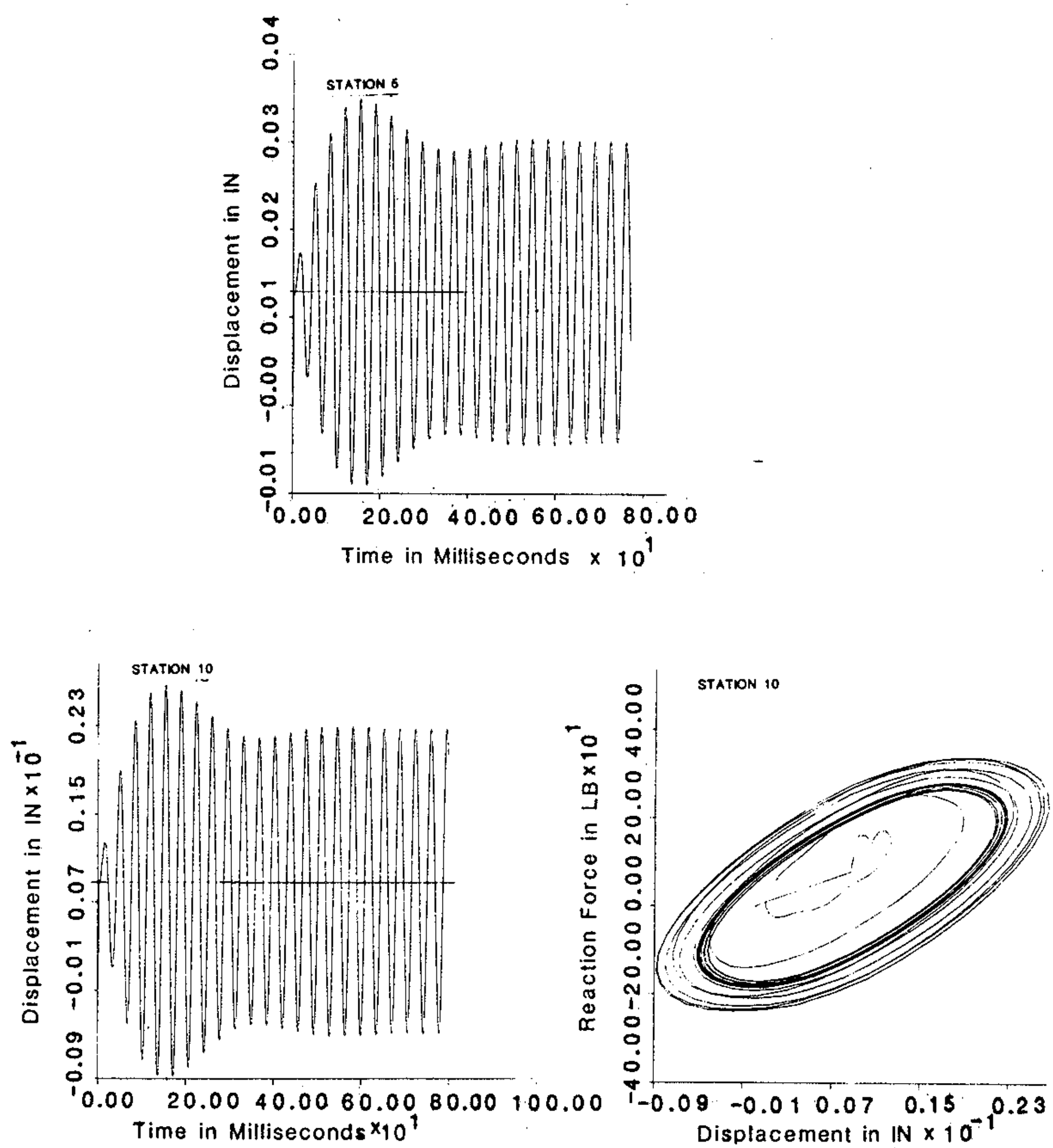


Fig. E.1. DRIVE, Single-Vertical Pile, Soil Set A, f = 28 Hz, $C^e = 60$, $F_A = 4000$ lb. (1 in. = 25.4 mm; 1 lb = 4.45 N)

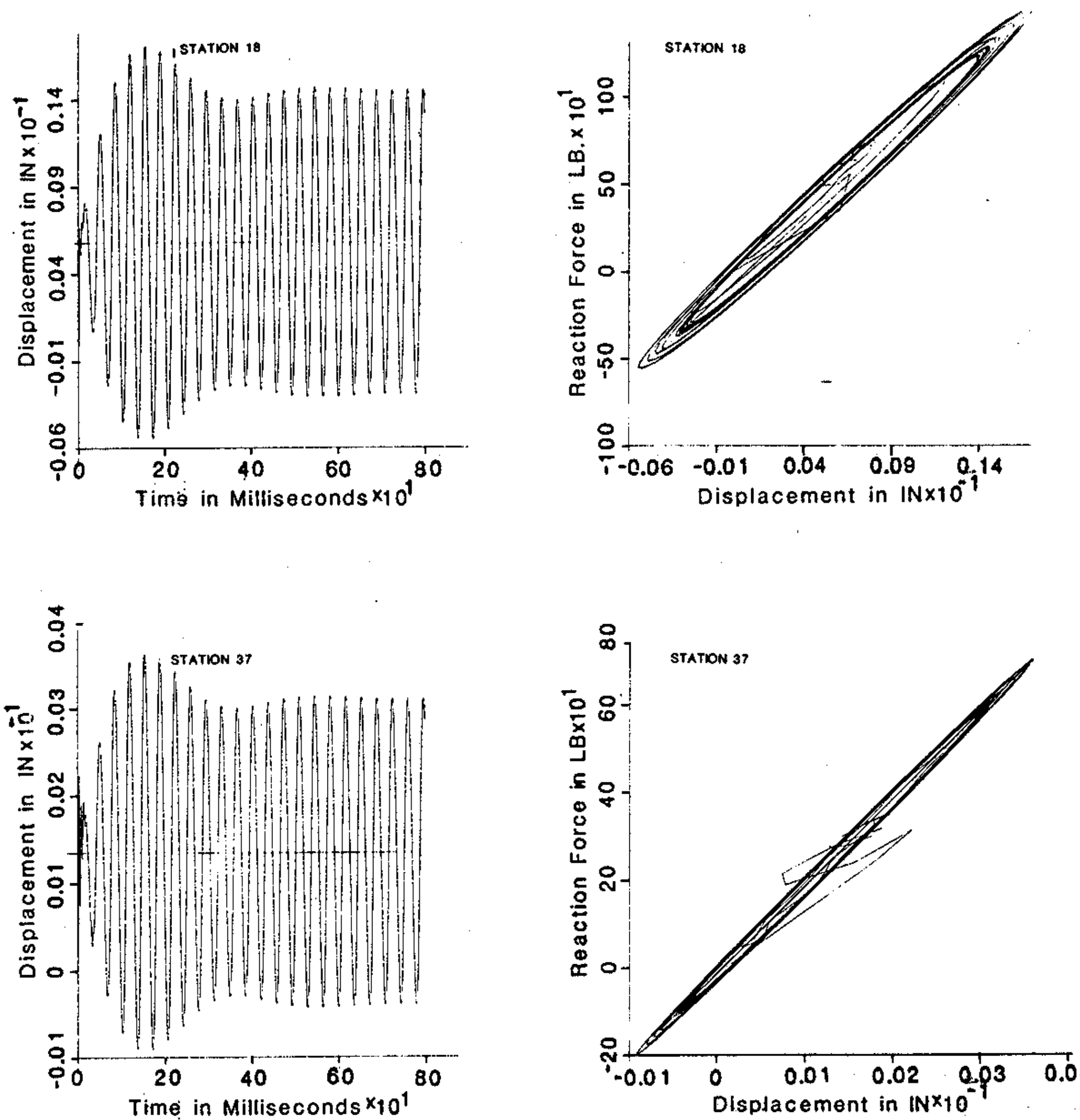

STATION 18
Displacement in IN x 10^-1
Time in Milliseconds x10^1
-0.06
-0.01
0.04
0.09
0.14
0
20
40
60
80
STATION 18
Reaction Force in LB. x 10^1
Displacement in INx10^-1
-100
-50
0
50
100
-0.06
-0.01
0.04
0.09
0.14
STATION 37
Displacement in IN x 10^-1
Time in Milliseconds x10^1
-0.01
0
0.01
0.02
0.03
0.04
0
20
40
60
80
STATION 37
Reaction Force in LBx10^1
Displacement in INx10^-1
-20
0
20
40
60
80
-0.01
0
0.01
0.02
0.03
0.04

Fig. E.1. Cont'd.

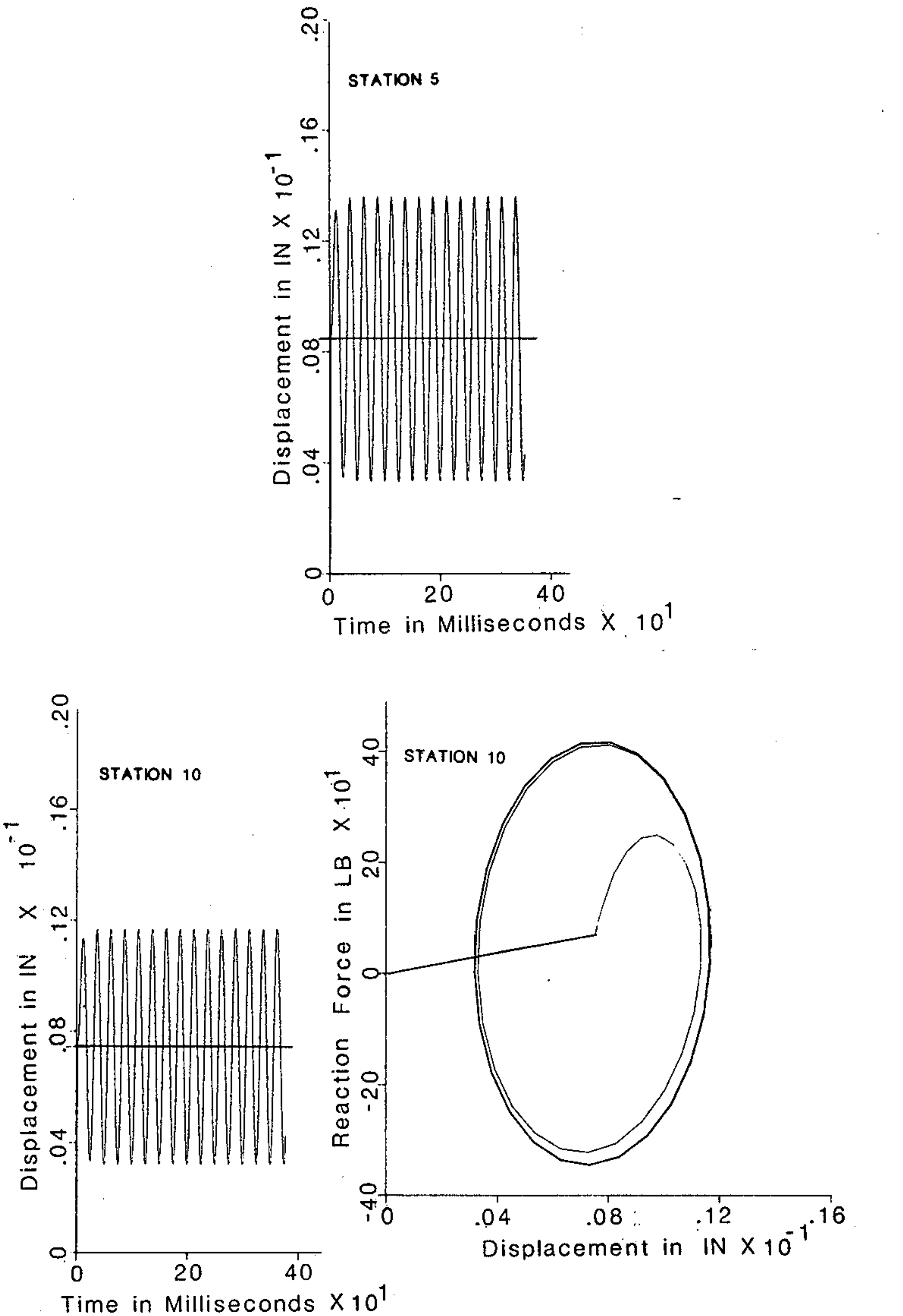


Fig. E.2. DRIVE, Group-Vertical Pile, Soil Set B, f = 40 Hz, C^e = 360, F_A = 4444 lb/Pile. (1in. = 25.4 mm; 1 lb = 4.45 N)

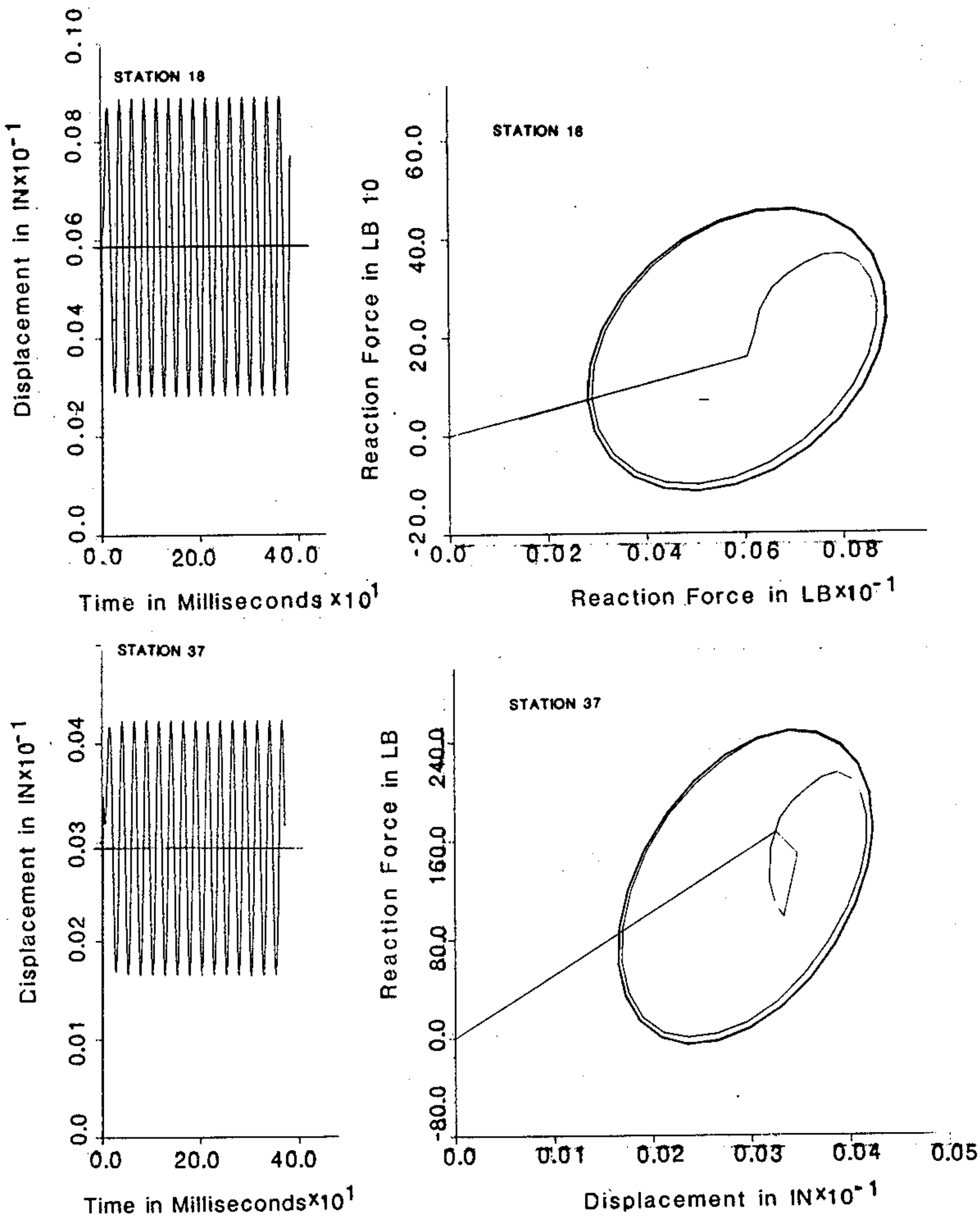

STATION 18
Displacement in IN×10⁻¹
0.0
0.02
0.04
0.06
0.08
0.10
Time in Milliseconds ×10¹
0.0
20.0
40.0
STATION 18
Reaction Force in LB 10
-20.0
0.0
20.0
40.0
60.0
Reaction Force in LB×10⁻¹
0.0
0.02
0.04
0.06
0.08
STATION 37
Displacement in IN×10⁻¹
0.0
0.01
0.02
0.03
0.04
Time in Milliseconds×10¹
0.0
20.0
40.0
STATION 37
Reaction Force in LB
-80.0
0.0
80.0
160.0
240.0
Displacement in IN×10⁻¹
0.0
0.01
0.02
0.03
0.04
0.05

Fig. E.2. Cont'd.

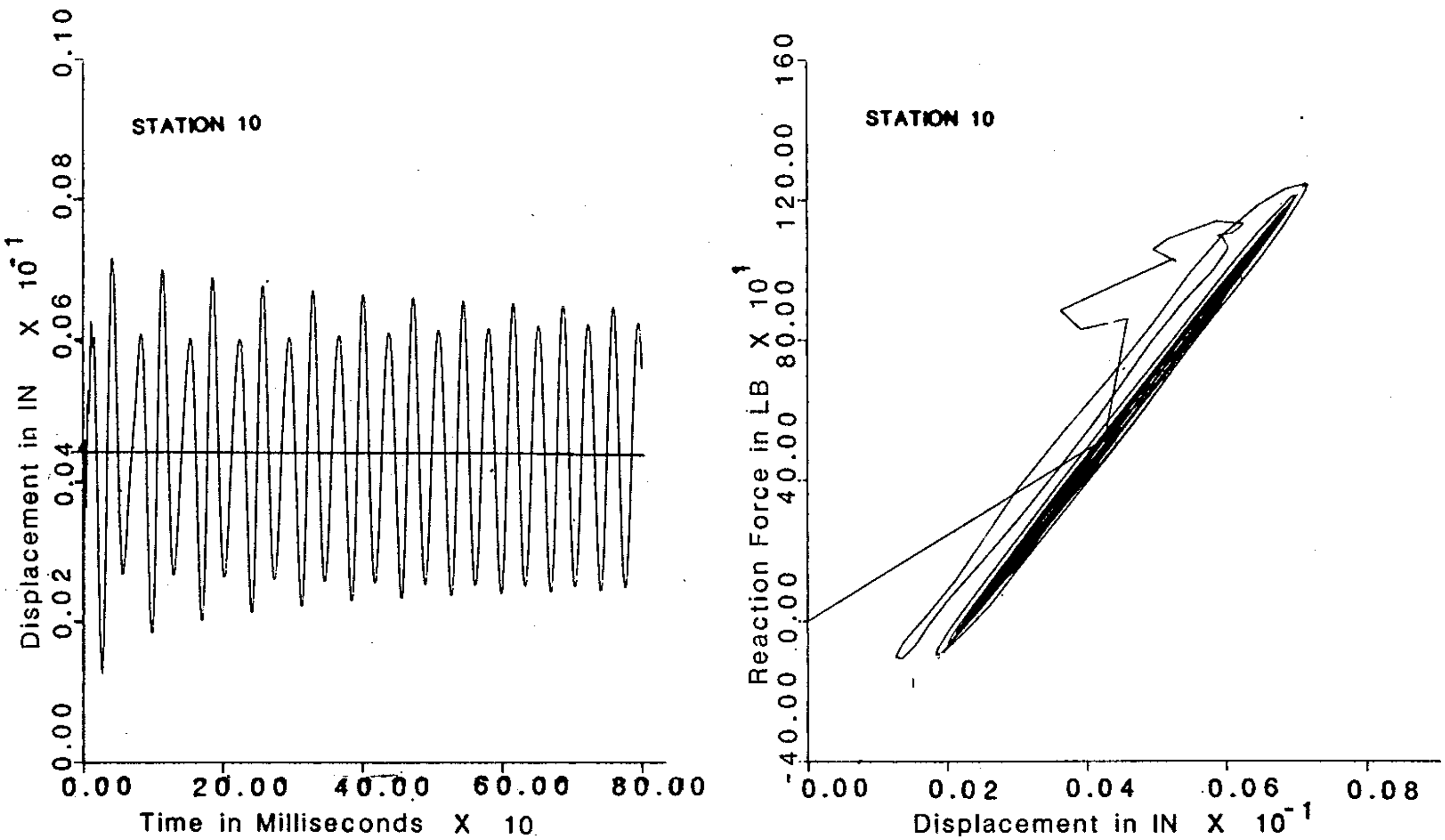


Fig. E.3. DRIVE, Single-Vertical Pile, Soil Set C, f = 28 Hz, C^e = 60, F_A = 4000 lb. (Atypical Behavior - Set C with low displacements) (1 in. = 25.4 mm; 1 lb = 4.45 N)

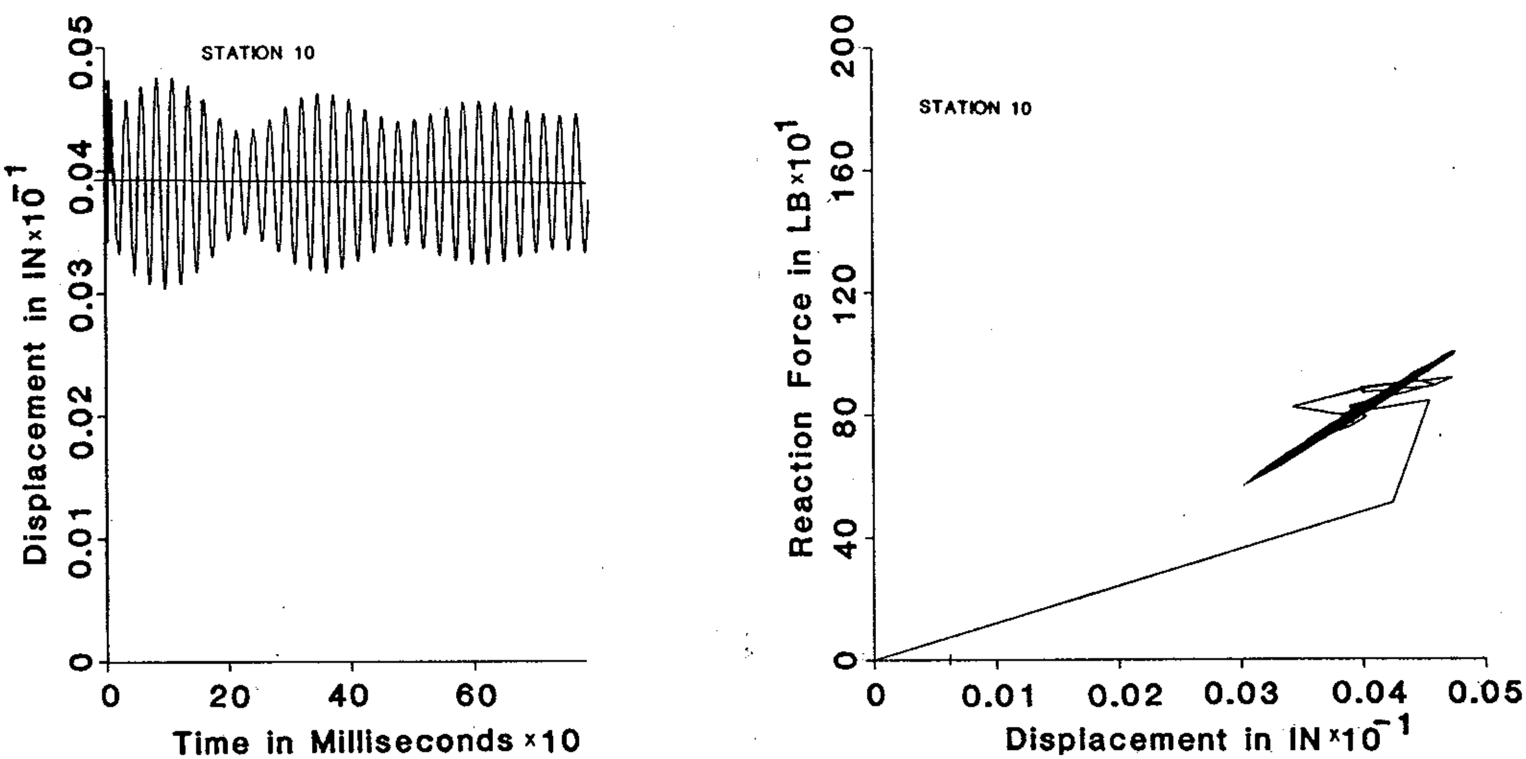


Fig. E.4. DRIVE, Single-Vertical Pile, Soil Set C, f = 38 Hz, C^e = 60, F_A = 400 lb. (Atypical Behavior - Set C with very low displacements) (1 in. = 25.4 mm; 1 lb = 4.45 n)

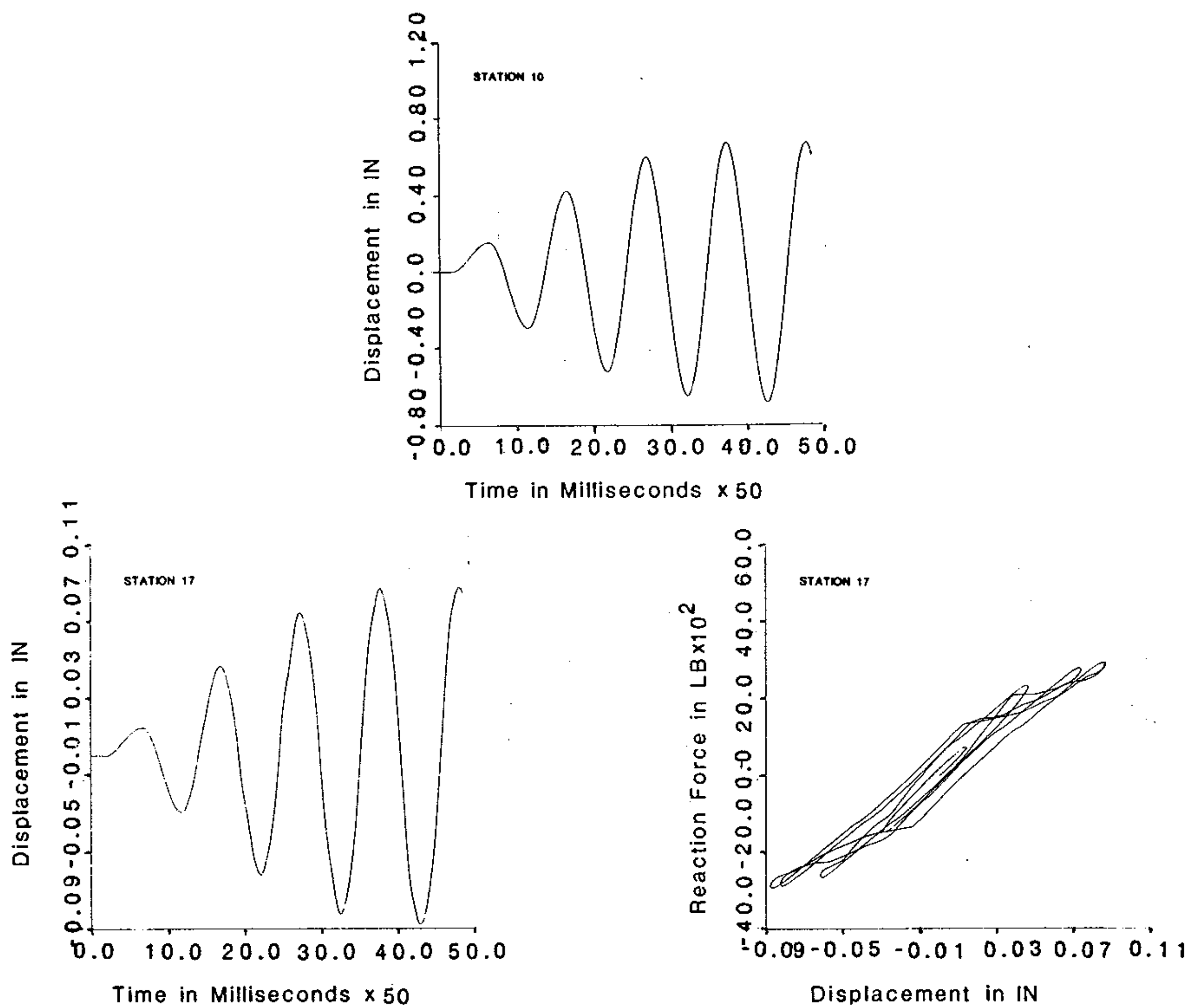


Fig. E.5. SPASM, Single-Horizontal Pile, P-y Set I, f = 2 Hz, F_L = 600 lb. (1 in. = 25.4 mm; 1 lb = 4.45 N)

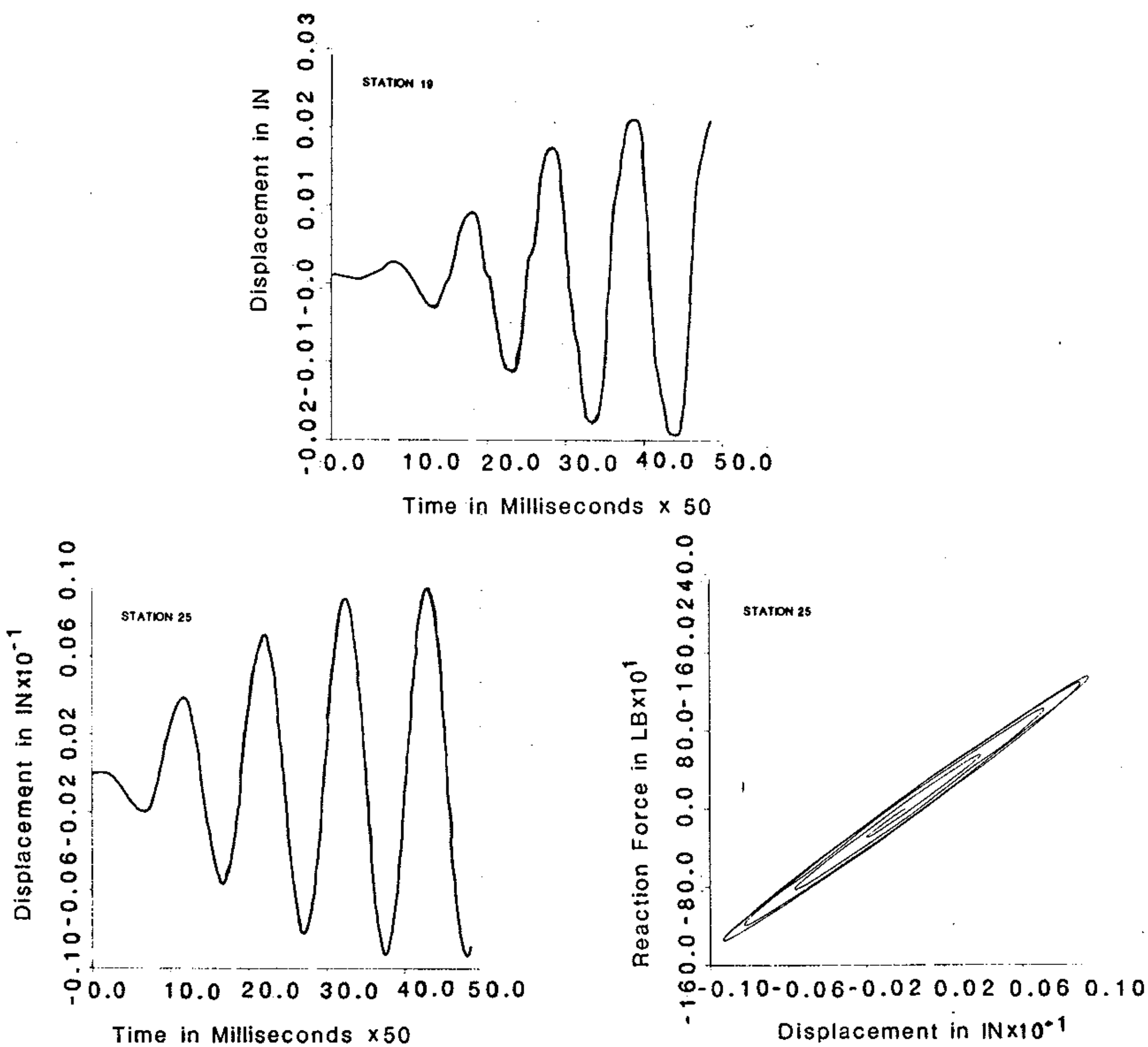

STATION 19
Displacement in IN
-0.02 -0.01 -0.0 0.0 0.01 0.02 0.03
0.0 10.0 20.0 30.0 40.0 50.0
Time in Milliseconds x 50
STATION 25
Displacement in INx10^-1
-0.10 -0.06 -0.02 0.02 0.06 0.10
0.0 10.0 20.0 30.0 40.0 50.0
Time in Milliseconds x50
STATION 25
Reaction Force in LBx10^1
-160.0 -80.0 0.0 80.0 160.0 240.0
-0.10 -0.06 -0.02 0.02 0.06 0.10
Displacement in INx10^-1

Fig. E.5. Cont'd.

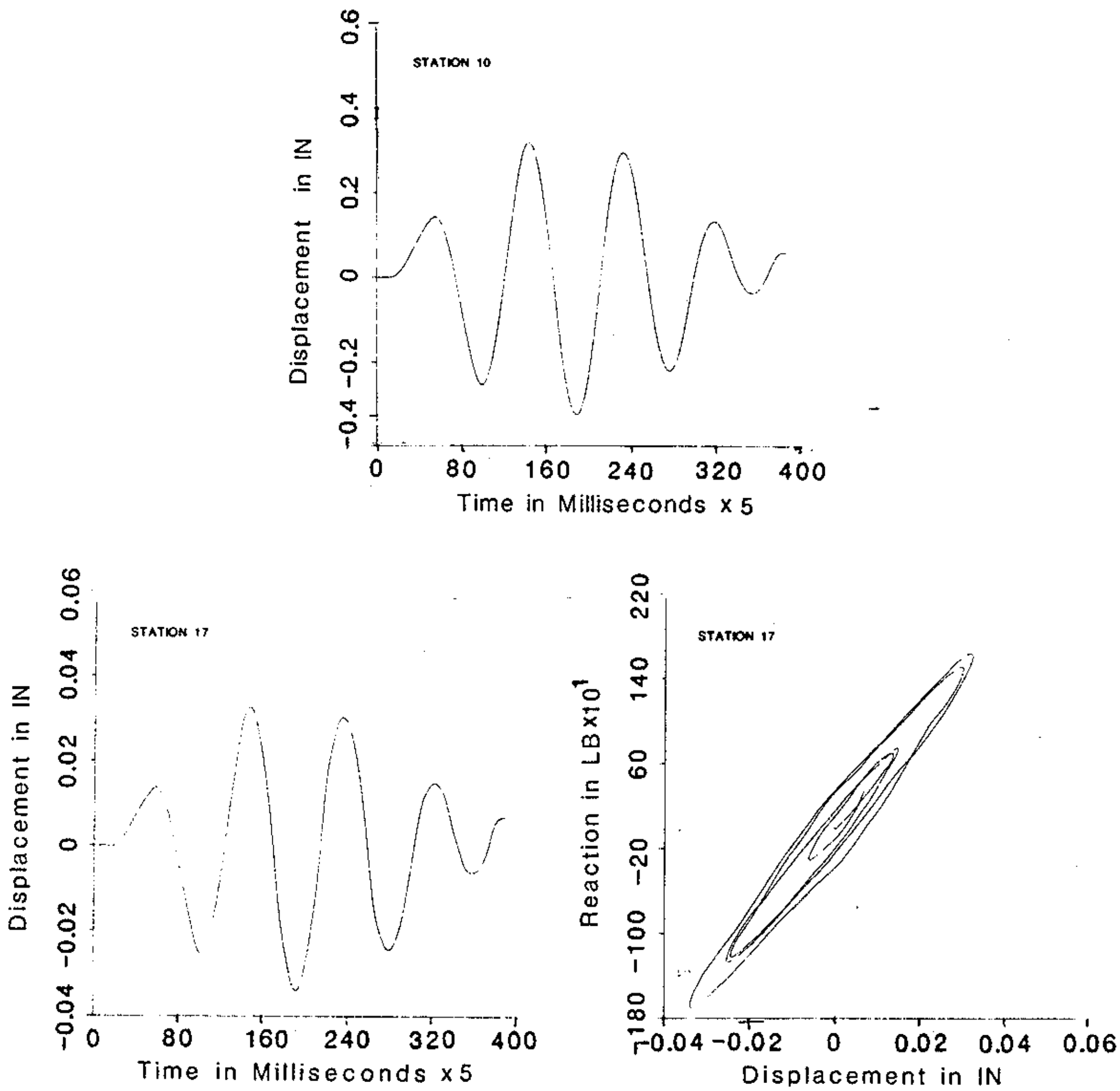


Fig. E.6. SPASM, Single-Horizontal Pile, P-y Set I, f = 2.5 Hz (above f_r), F_L = 600 lb. (Typical Post - Resonance Behavior)
(1 in. = 25.4 mm; 1 lb = 4.45 N)

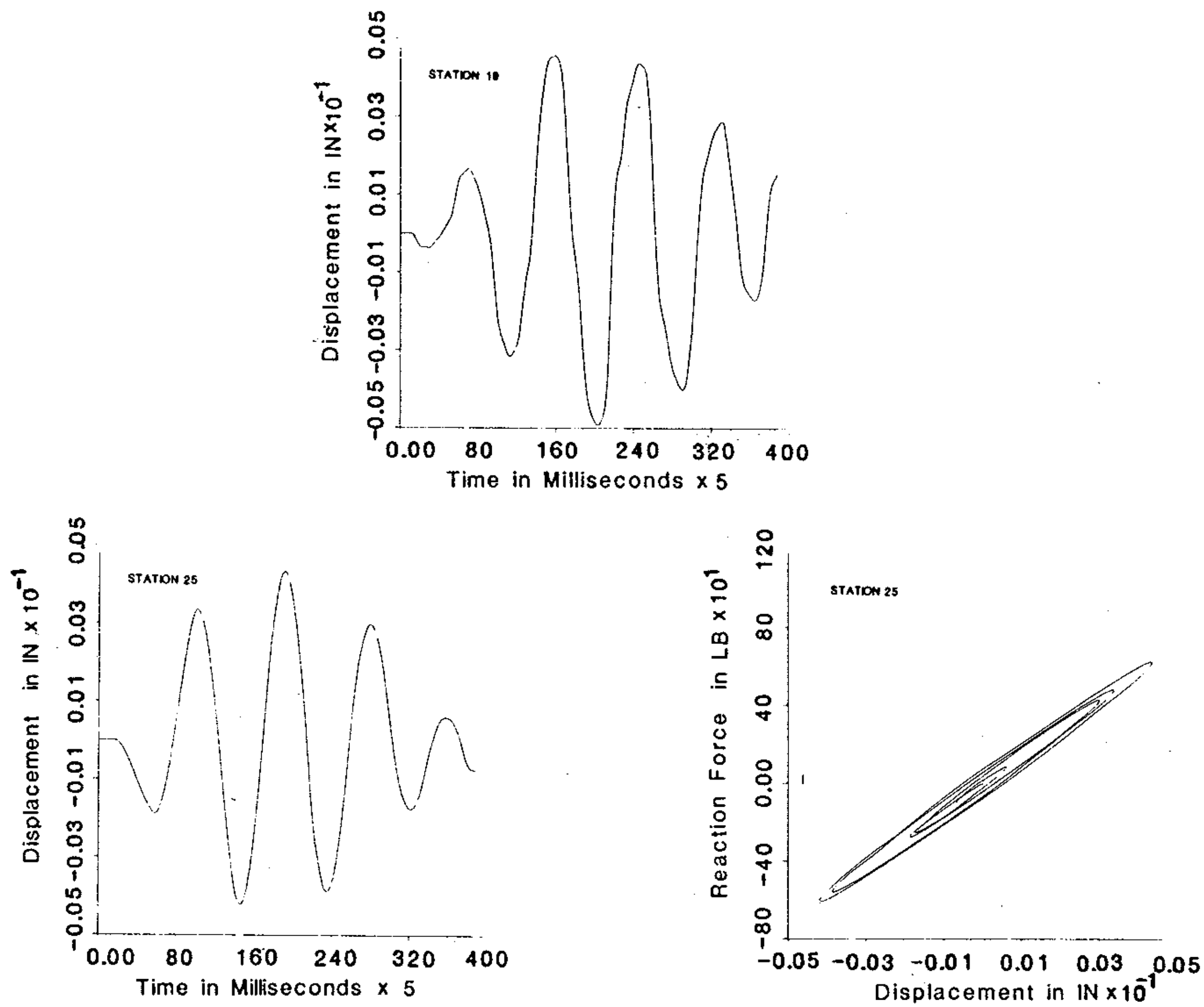

STATION 19
Displacement in IN×10^{-1}
0.05
0.03
0.01
-0.01
-0.03
-0.05
0.00
80
160
240
320
400
Time in Milliseconds x 5
STATION 25
Displacement in IN x 10^{-1}
0.05
0.03
0.01
-0.01
-0.03
-0.05
0.00
80
160
240
320
400
Time in Milliseconds x 5
STATION 25
Reaction Force in LB x 10^{1}
120
80
40
0.00
-40
-80
-0.05
-0.03
-0.01
0.01
0.03
0.05
Displacement in IN x 10^{-1}

Fig. E.6. Cont'd.

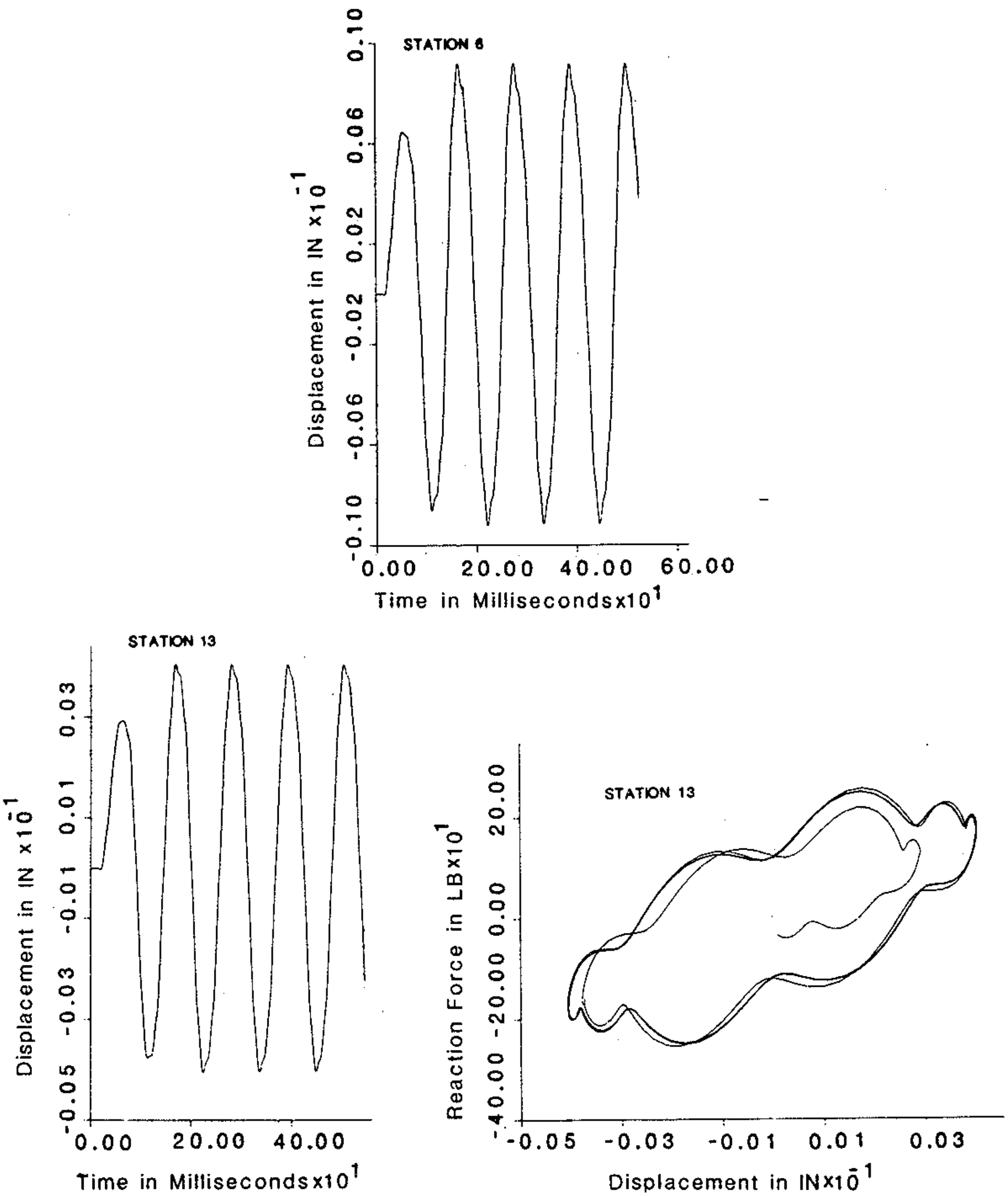


Fig. E.7. SPASM, Group-Horizontal Pile, P-y Set II, f = 9 Hz (equal to approx. f_r), F_L = 444 lb/Pile. (Typical Near - Resonance Output) (1 in. = 25.4 mm; 1 lb = 4.45 N)

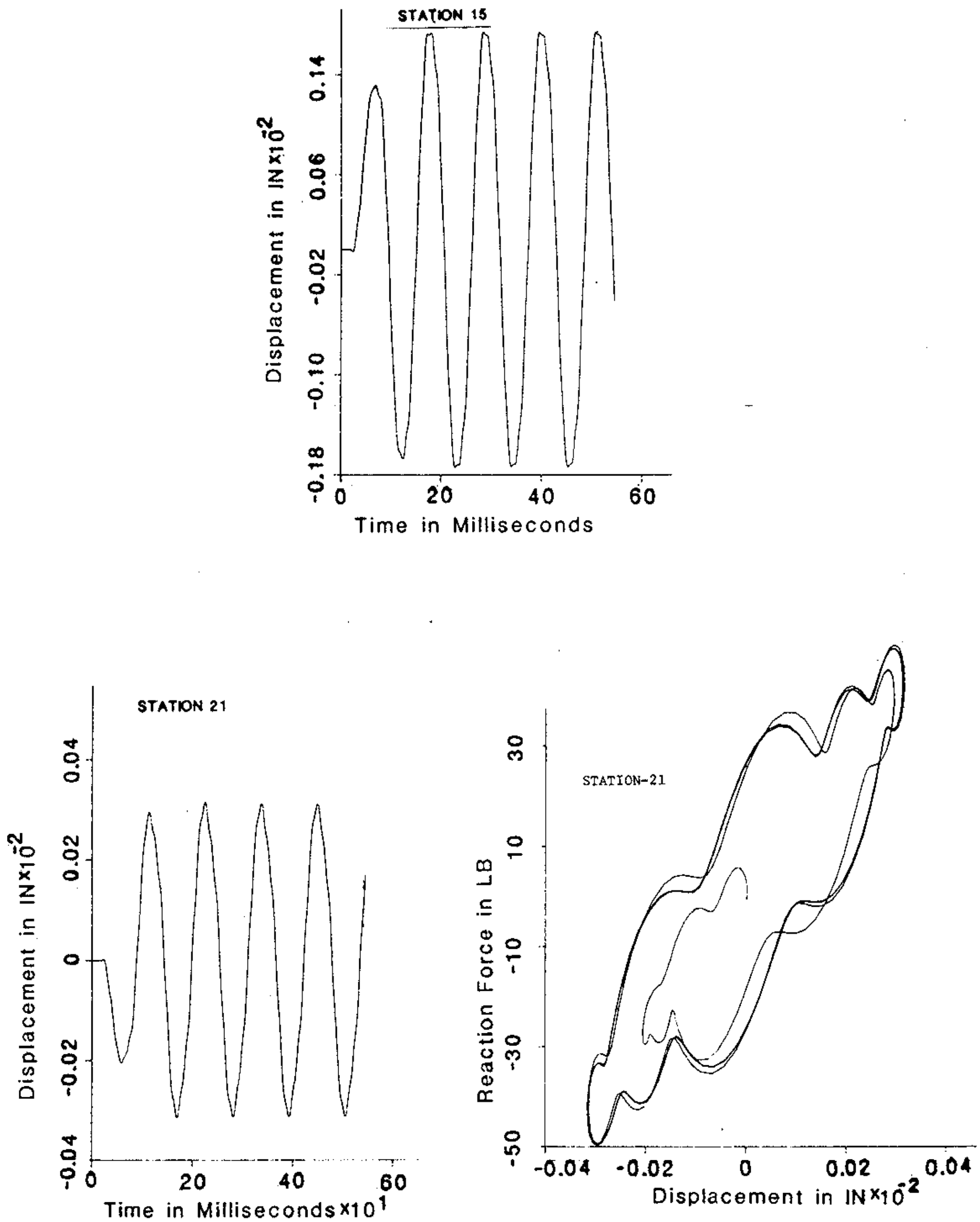

STATION 15
Displacement in IN×10⁻²
0.14
0.06
-0.02
-0.10
-0.18
0
20
40
60
Time in Milliseconds
STATION 21
Displacement in IN×10⁻²
0.04
0.02
0
-0.02
-0.04
0
20
40
60
Time in Milliseconds×10¹
STATION-21
Reaction Force in LB
30
10
-10
-30
-50
-0.04
-0.02
0
0.02
0.04
Displacement in IN×10⁻²

Fig. E.7. Cont'd.

APPENDIX F

Tabulation of Records and Tapes
Made During Field Study

APPENDIX F

The following table is self-explanitory. An explanation of the abbreviations used is as follows:

FIELD REEL	-	Number of tape used to record raw data in the field.
FIELD FFID	-	Record number.
SHOT	-	Shot number (redundant).
LGTH	-	Length of record in milliseconds.
CHAN	-	Allocation system for instruments to channels in field recording system.
MODE	-	type of test (VERTI - vertical, ROCKI - rocking, HORIZ-horizontal, TORSI - torsional).
FREQ	-	Range of frequencies covered by vibrator.
FORCE	-	Nominal single amplitude force in kips.
DATE	-	Date of test, 1981.
TIME	-	Time of start of test (CDT).

****

DEMUXED TAPE DIRECTORY 9/24/81

****

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE

****

* GROUP CAP VERTICAL AND ROCKING LOADING - FHWA VIBRATORS *

CIV200	0347	0200	30256	GL-1	VERTI	12.0-00.0	00.66	7/28	1732	
CIV200	0348	0201	30628	GL-1	VERTI	12.0-00.0	00.66	7/28	1732	
CIV200	0349	0202	30132	GL-2	VERTI	12.0-00.0	00.66	7/28	1732	
CIV200	0350	0203	30008	GL-2	VERTI	12.0-00.0	00.66	7/28	1732	
CIV201	0351	0205	30008	GL-2	ROCKI	12.0-00.0	00.66	7/29	1732	
CIV201	0352	0206	32132	GL-2	ROCKI	12.0-00.0	00.66	7/29	1738	
CIV201	0353	0207	30380	GL-1	ROCKI	12.0-00.0	00.66	7/29	1742	
CIV201	0354	0208	30132	GL-1	ROCKI	12.0-00.0	00.66	7/29	1747	
CIV301	0356	0210	32768	GL-3	VERTI	12.0-00.0	00.66	8/03	1729	CIV701
CIV301	0357	0211	32612	GL-3	ROCKI	12.0-00.0	00.66	8/03	1730	"
CIV301	0358	0212	32768	GL-4	VERTI	12.0-00.0	00.66	8/03	1752	"
CIV301	0359	0213	32768	GL-4	ROCKI	12.0-00.0	00.66	8/03	1758	"
CIV301	0360	0214	32768	GL-5	VERTI	12.0-00.0	00.66	8/03	1814	"
CIV302	0361	0215	32768	GL-5	ROCKI	12.0-00.0	00.60	8/03	1823	"
CIV302	0362	0216	32488	GL-3	VERTI	47.5-10.0	00.66	8/04	1812	"
CIV302	0363	0217	32768	GL-3	ROCKI	47.5-10.0	00.66	8/04	1820	"
CIV302	0364	0218	32768	GL-4	VERTI	47.5-10.0	00.66	8/05	1304	"
CIV302	0365	0219	32768	GL-4	ROCKI	47.5-10.0	00.66	8/05	1310	"
	0366			GL-5	VERTI	47.5-10.0	00.66	8/05	1345	"
(NO	0367			GL-5	ROCKI	47.5-10.0	00.66	8/05	1409	"
	0368			GL-5	ROCKI	47.5-10.0	00.66	8/05	1412	"
RECORD)	0369			GL-5	ROCKI	47.5-10.0	02.00	8/05	1456	"
	0370			GL-5	ROCKI	47.5-10.0	02.00	8/05	1506	"
CIV303	0371	0220	32116	GL-5	VERTI	47.5-10.0	00.66	8/06	1745	"
CIV303	0372	0221	32240	GL-5	ROCKI	46.0-10.0	00.66	8/06	1759	"
CIV303	0373	0222	32116	GL-5	VERTI	47.5-10.0	02.00	8/06	1815	"
CIV303	0374	0223	32736	GL-5	ROCKI	47.5-10.0	02.00	8/06	1830	"
CIV303	0375	0224	32716	GL-4	VERTI	47.5-10.0	02.00	8/06	1912	"
(NO	0376			GL-4	ROCKI	47.5-10.0	02.00	8/06	1912	"
RECORD)	0377			GL-4	ROCKI	47.5-10.0	02.00	8/06	1940	"
CIV304	0378	0225	32768	GL-4	ROCKI	47.5-10.0	02.00	8/06	1852	"
CIV304	0379	0226	32768	GL-3	VERTI	47.5-10.0	02.00	8/06	1910	"
CIV304	0380	0227	32612	GL-3	ROCKI	47.5-10.0	02.00	8/06		"
CIV304	0381	0228	32240	GL-6	VERTI	47.5-10.0	02.00	8/04	2115	"
CIV304	0382	0229	32612	GL-6	VERTI	47.5-10.0	02.00	8/04	2118	"
CIV351	0383	1000		GL-6	ROCKI	47.5-10.0	02.00	8/06	2135	CIV702

* * GROUP CAP IMPACT TESTS * *

CIV800	0384	4001		GL-7	VERTI			8/09	2100	CIV801
CIV800	0385	4002	3790	GL-7	VERTI			8/09	2100	"
CIV800	0386	4003	3798	GL-7	VERTI			8/09	2100	"
CIV800	0387	4004	3148	GL-7	VERTI			8/09	2100	"

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV800	0388	4005	3972	GL-7	VERTI			8/09	2100	"
CIV800	0389	4006	3842	GL-7	VERTI			8/09	2100	"
CIV800	0390	4007	4076	GL-7	VERTI			8/09	2100	"
CIV800	0391	4008	3686	GL-7	VERTI			8/09	2100	"
CIV800	0392	4009	3776	GL-7	VERTI			8/09	2100	"
CIV800	0393	4010	3778	GL-7	VERTI			8/09	2100	"
CIV800	0394	4011	3694	GL-7	VERTI			8/09	2100	"
CIV800	0395	4012	3716	GL-7	VERTI			8/09	2100	"
CIV800	0396	4013	3630	GL-7	VERTI			8/09	2100	"
CIV800	0397	4014	3802	GL-7	VERTI			8/09	2100	"
CIV800	0398	4015	3824	GL-7	VERTI			8/09	2240	"
CIV800	0399	4016	3774	GL-7	VERTI			8/09	2240	"
CIV800	0400	4017	3708	GL-7	VERTI			8/09	2240	"
CIV800	0401	4018	3790	GL-7	VERTI			8/09	2240	"
CIV800	0402	4019	3830	GL-7	VERTI			8/09	2240	"
CIV800	0403	4020	3658	GL-7	VERTI			8/09	2240	"
CIV800	0404	4021	3826	GL-7	VERTI			-8/09	2240	"
CIV800	0405	4022	3826	GL-7	VERTI			8/09	2240	"
CIV800	0406	4023	3808	GL-7	VERTI			8/09	2240	"
CIV800	0407	4024	3704	GL-7	VERTI			8/09	2240	"
CIV800	0408	4025	3768	GL-7	VERTI			8/09	2240	"
CIV800	0409	4026	3818	GL-7	VERTI			8/09	2240	"
CIV800	0410	4027	3790	GL-7	VERTI			8/09	2240	"
CIV800	0411	4028	3692	GL-7	VERTI			8/09	2240	"
CIV800	0412	4029	3762	GL-7	VERTI			8/09	2240	"
CIV800	0413	4030	3692	GL-7	VERTI			8/09	2240	"
CIV800	0414	4031	3516	GL-8	VERTI			8/10	1325	"
CIV800	0415	4032	3846	GL-8	VERTI			8/10		"
CIV800	0416	4033	3714	GL-8	VERTI			8/10		"
CIV800	0417	4034	3830	GL-8	VERTI			8/10		"
CIV800	0418	4035	3724	GL-9	VERTI			8/10	1340	"
CIV800	0419	4036	3716	GL-9	VERTI			8/10		"
CIV800	0420	4037	3698	GL-9	VERTI			8/10		"
CIV800	0421	4038	3700	GL-9	VERTI			8/10	1345	"
CIV800	0422	4039	3506	GL10	VERTI			8/10		"
CIV800	0423	4040	3696	GL10	VERTI			8/10		"
CIV800	0424	4041	3666	GL10	VERTI			8/10		"
CIV800	0425	4042	3702	GL10	VERTI			8/10		"
CIV800	0426	4043	3696	GL10	ROCKI			8/10		"
CIV800	0427	4044	3540	GL10	ROCKI			8/10		"
CIV800	0428	4045	3846	GL10	ROCKI			8/10		"
CIV800	0429	4046	3680	GL10	ROCKI			8/10		"
CIV800	0430	4047	3742	GL-8	ROCKI			8/10		"
CIV800	0431	4048	3454	GL-8	ROCKI			8/10		"
CIV800	0432	4049	3598	GL-8	ROCKI			8/10		"
CIV800	0433	4050	3620	GL-8	ROCKI			8/10	1630	"
CIV800	0434	4051	3174	GL-8	HORIZ			8/10		"
CIV800	0435	4052	3576	GL-8	HORIZ			8/10		"
CIV800	0436	4053	3740	GL-8	HORIZ			8/10		"
CIV800	0437	4054	3586	GL-8	HORIZ			8/10		"
CIV800	0438	4055	3636	GL-8	HORIZ			8/10		"

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV800	0439	4056	3148	GL-8	HORIZ			8/10		"
CIV800	0440	4057	3332	GL10	HORIZ			8/10	1930	"
CIV800	0441	4058	3634	GL10	HORIZ			8/10		"
CIV800	0442	4059	3396	GL10	HORIZ			8/10		"
CIV800	0443	4060	3492	GL10	HORIZ			8/10	1935	"
CIV800	0444	4061	3426	GL10	TORSI			8/10	2010	"
CIV800	0445	4062	3402	GL10	TORSI			8/10		"
CIV800	0446	4063	3400	GL10	TORSI			8/10		"
CIV800	0447	4064	3524	GL10	TORSI			8/10	2015	"
CIV800	0448	4065	3412	GL-9	TORSI			8/10	2020	"
CIV800	0449	4066	3518	GL-9	TORSI			8/10		"
CIV800	0450	4067	3464	GL-9	TORSI			8/10		"
CIV800	0451	4068	3516	GL-9	TORSI			8/10	2025	"
CIV800	0452	4069	3550	GL-9	TORSI			8/10		"

* * SINGLE CAP - IMPACT TESTS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV800	0453	4070	3446	SL-1	VERTI			8/11	2450	"
CIV800	0454	4071	3600	SL-1	VERTI			8/11		"
CIV800	0455	4072	3460	SL-1	VERTI			8/11		"
CIV800	0456	4073	3450	SL-1	VERTI			8/11		"
CIV800	0457	4074	3778	SL-1	VERTI			8/11		"
CIV800	0458	4075	3460	SL-1	VERTI			8/11		"
CIV800	0459	4076	3506	SL-1	VERTI			8/11		"
CIV800	0460	4077	3608	SL-1	VERTI			8/11	2455	"
CIV800	0461	4078	3616	SL-1	HORIZ			8/11		"
CIV800	0462	4079	3598	SL-1	HORIZ			8/11		"
CIV800	0463	4080	3700	SL-1	HORIZ			8/11		"
CIV800	0464	4081	3600	SL-1	HORIZ			8/11		"
CIV800	0465	4082	3680	SL-1	ROCKI			8/11	0130	"
CIV800	0466	4083	3616	SL-1	ROCKI			8/11	0132	"
CIV800	0467	4084	3550	SL-1	TORSI			8/11	0132	"
CIV800	0468	4085	3592	SL-1	TORSI			8/11	0134	CIV801

* * SINGLE CAP HORIZONTAL LOADING - FHWA VIBRATORS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV351	0469	1001	32612	SL-1	HORIZ	00.0-16.8	00.00	8/11	0220	CIV702
CIV351	0470	1002	32612	SL-1	HORIZ	16.4-01.8	00.00	8/11	0223	"
CIV351	0471	1003	32612	SL-2	HORIZ	16.4-01.8	00.20	8/11	0239	"
CIV351	0472	1004	32572	SL-2	HORIZ	01.8-16.4	00.20	8/11	0250	"
CIV352	0474	1005	32768	SL-2	HORIZ	00.0-16.4	00.00	8/11		"
CIV352	0475	1006	32240	SL-2	HORTS	16.4-01.8	00.00	8/11		"
CIV352	0476	1007	32768	SL-2	HORTZ	16.4-01.8	00.20	8/11	1750	"
CIV352	0477	1008	32116	SL-2	HORTZ	16.4-01.8	00.20	8/11		"
CIV352	0478	1009	32768	SL-2	HORIZ	2.5HZ		8/11		"
CIV352	0479	1010	10394	SL-3	HORIZ	00.0-03.0		8/11		"
CIV353	0481	1011	32768	SL-3	HORIZ	00.0-03.0		8/12		"
CIV353	0482	1012	31744	SL-3	HORIZ	00.0-03.0		8/12		"
CIV353	0483	1013	32684	SL-3	HORIZ	00.0-03.0		8/12		"
CIV353	0484	1014	31992	SL-3	HORIZ	00.0-03.0		8/12		"
CIV353	0485	1015	32768	SL-3	HORIZ	00.0-03.0		8/12		"

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV353	0486	1016	32768	SL-3	HORIZ	00.0-03.0		8/12		"
CIV353	0487	1017	10022	SL-3	HORIZ	00.0-03.0		8/12		"
CIV354	0489	1018	32768	SL-3	HORIZ	00.0-03.0		8/12		CIV354
CIV354	0490	1019	32768	SL-3	HORIZ	00.0-03.0		8/12		"
CIV354	0491	1020	32768	SL-3	HORIZ	00.0-03.0		8/12		"

* * SINGLE CAP VERTICAL LOADING - WES VIBRATORS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV360	0601	2001	32768	SL-3	VERTI	50.0-02.0	00.40	8/14	1725	CIV960
CIV360	0602	2002	32768	SL-3	VERTI	50.0-02.0	00.40	8/14	1730	"
CIV360	0603	2003	32768	SL-3	VERTI	50.0-02.0	00.40	8/14	1732	"
CIV360	0604	2004	32612	SL-3	VERTI	50.0-02.0	00.40	8/14	1735	"
CIV360	0605	2005	32768	SL-3	VERTI	50.0-02.0	00.40	8/14	1737	"
CIV361	0606	2006	32612	SL-3	VERTI	30.0-25.0	00.40	8/14	1755	"
CIV361	0607	2007	32768	SL-3	VERTI	17.00	00.40	8/14	1801	"
CIV361	0608	2008	32768	SL-3	VERTI	27.00	00.40	8/14	1803	"
CIV361	0609	2009	32768	SL-3	VERTI	37.00	00.40	8/14	1806	"
CIV361	0610	2010	32768	SL-3	VERTI	50.0-45.0	00.40	8/14	1808	"
	0611	NO RECORD		SL-3	VERTI	50.0-02.0	00.40	8/15		"
CIV362	0612	2011	16864	SL-3	VERTI	18.25	00.40	8/15	1404	"
CIV362	0613	2012	16988	SL-3	VERTI	23.25	00.40	8/15	1409	"
CIV362	0614	2013	16492	SL-3	VERTI	28.25	00.40	8/15	1412	"
CIV363	0615	2014	32736	SL-3	VERTI	50.0-02.0	00.40	8/15	1447	"
CIV363	0616	2015	32768	SL-3	VERTI	50.0-02.0	04.00	8/15	1509	"
CIV363	0617	2016	32736	SL-3	VERTI	15.00	04.00	8/15	1512	"
CIV363	0618	2017	32768	SL-3	VERTI	20.00	04.00	8/15		"
CIV363	0619	2018	32768	SL-3	VERTI	25.00	04.00	8/15		"
	0620	NO RECORD		SL-3	VERTI	50.0-02.0	08.00	8/15		"
CIV364	0621	2019	32736	SL-3	VERTI	50.0-02.0	08.00	8/15	1615	"
CIV364	0622	2020	32768	SL-3	VERTI	50.0-02.0	01.60	8/15	1617	"
CIV364	0623	2021	30008	SL-3	VERTI	50.0-02.0	00.40	8/15	1628	"
CIV364	0624	2022	32768	SL-3	VERTI	30.0-02.0	00.40	8/15		"
CIV364	0625	2023	32768	SL-3	VERTI	23.25	00.40	8/15		"

* * GROUP CAP VERTICAL LOADING - WES VIBRATORS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV365	0631	2024	32768	GL11	VERTI	50.0-02.0	04.00	8/17		"
CIV365	0632	2025	32768	GL11	VERTI	50.0-02.0	04.00	8/17		"
CIV365	0633	2026	32768	GL11	VERTI	50.0-02.0	04.00	8/17		"
CIV365	0633	N.R.	32768	GL11	VERTI	90.0-40.0	04.00	8/17		"
CIV365	0634	2027	32364	GL11	VERTI	90.0-70.0	04.00	8/17		"
CIV365	0635	2028	32768	GL11	VERTI	74.00	04.00	8/17		CIV960
CIV365	0636	2029	32768	GL12	VERTI	90.0-40.0	04.00	8/17		CIV972
CIV366	0637	2030	32768	GL13	VERTI	90.0-40.0	04.00	8/17	1359	"
CIV366	0638	2031	32768	GL13	VERTI	50.0-02.0	04.00	8/17	1402	"
CIV366	0639	2032	32768	GL14	VERTI	90.0-40.0	04.00	8/17	1421	"
CIV366	0640	2033	32768	GL14	VERTI	*90.0-70.0*	16.00	8/17	1413	"
CIV367	0641	2034	28024	GL14	VERTI	*73.0*	16.00	8/17	1446	"
CIV367	0642	2035	32768	GL12	VERTI	*90.0-40.0*	16.00	8/17	1450	"
CIV367	0643	2036	32364	GL12	VERTI	*50.0-02.0*	16.00	8/17	1505	"
CIV367	0644	2037	32612	GL12	VERTI	50.0-02.0	16.00	8/17	1508	"

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV367	0645	2038	32768	GL12	VERTI	50.0-02.0	40.00	8/17		CIV972
CIV368	0213	2039	04216	GL12	VERTI	50.0-02.0	40.00	8/17	1639	"
CIV368	100A	2040	28272	GL13	VERTI	50.0-02.0	40.00	8/17	1648	
CIV369	100B	2041	32768	GL12	VERTI	50.0-02.0	40.00	8/17	1714	
CIV370	100C	2042	32768	GL12	VERTI	50.0-02.0	04.00	8/17	1720	
CIV371	100D	2043	32768	GL13	VERTI	90.0-40.0	04.00	8/17	1725	

* * GROUP CAP HORIZONTAL LOADING - WES VIBRATORS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
CIV801	0801	5001	32768	GL15	HORIZ	50.0-02.0	00.40	8/19	1542	CIV521
CIV801	0802	5002	32116	GL15	HORIZ	50.0-02.0	04.00	8/19		"
CIV801	0803	5003	32768	GL15	HORIZ	14.00	04.00	8/19		"
CIV801	0804	5004	32488	GL15	HORIZ	09.00	04.00	8/19		"
CIV801	0805	5005	32768	GL15	HORIZ	04.00	04.00	8/19		"
CIV806	0806	5006	32768	GL15	HORIZ	50.0-02.0	08.00	8/19		"
CIV806	0807	5007	32736	GL15	HORIZ	50.0-02.0	08.00	8/19		"
CIV806	0808	5008	30132	GL15	HORIZ	50.0-02.0	04.00	-8/19		"
CIV806	0809	5009	32768	GL15	HORIZ	24.00	09.00	8/19		"
CIV806	0810	5010	32768	GL15	HORIZ	15.00	09.00	8/19		"
CIV811	0811			GL15	HORIZ	09.00	05.00	8/19	1647	"
CIV811	0812			GL15	HORIZ	90.0-40.0	00.40	8/19		"
CIV811	0812			GL15	HORIZ	50.0-08.0	00.40	8/19		"
CIV814	0814	5011	32768	GL15	HORIZ	50.0-02.0	00.40	8/19	1658	"
CIV914	0815	5012	32768	GL15	HORIZ	50.0-02.0	00.40	8/19	1704	"
CIV816	0816	5013	27652	GL15	HORIZ	50.0-02.0	00.40	8/19	1713	"
CIV916	0817	5014	32768	GL15	HORIZ	50.0-02.0	04.00	8/19		"

* * SINGLE CAP HORIZONTAL LOADING - WES VIBRATORS * *

FIELD REEL	FIELD FFID	SHOT	LGTH MSEC	CHAN	MODE	FREQ	FORCE (KIPS)	DATE	TIME	GOUT TAPE
	0821			SL-4	HORIZ		00.20	8/20	1426	"
	0822				HORIZ		00.20	8/20	1424	"
	0823				HORIZ	01.32	00.20	8/20		"
CIV824	0824	5015	32768		HORIZ	50.0-01.0	00.20	8/20	1440	"
CIV824	0825	5016	32768		HORIZ	50.0-01.0	00.20	8/20	1442	"
CIV824	0826	5017	22320		HORIZ	15.0-00.5	00.20	8/20	1446	"
CIV831	0831	5018	32768		HORIZ	15.0-00.5	00.20	8/20	1452	"
CIV831	0832	5019	32612	SL-4	HORIZ	15.0-00.5	00.20	8/20	1456	"
CIV831	0832	5020	20088	SL-4	HORIZ	01.32	00.20	8/20		CIV521
CIV834	0834	6001	32612	SL-4	HORIZ	50.0-00.5	00.20	8/20	1506	CIV522
CIV834	0835	6002	32612	SL-4	HORIZ	15.0-00.5	00.60	8/20	1510	"
CIV834	0836	6003	32768	SL-4	HORIZ	01.32	00.60	8/20		"
CIV837	0837	6004	32000	SL-4	HORIZ	05.0-00.5	00.60	8/20		"
CIV837	0838	6005	32000	SL-4	HORIZ	03.00	00.25	8/20	1525	"
CIV837	0839	6006	N.REC	SL-4	HORIZ	05.00	00.60	8/20		"
CIV840	0840	6006	32612	SL-4	HORIZ	15.0-00.5	00.20	8/20	1530	"
CIV840	0841	6007	32488	SL-4	HORIZ	15.0-00.5	00.20	8/20	1536	"
CIV840	0842	6008	19840	SL-4	HORIZ	50.0-10.0	00.20	8/20	1540	CIV522

NOTES:

(1) "FIELD REEL"IS THE PHYSICAL MAGNETIC TAPE ON WHICH THE FIELD RECORD WAS RECORDED

(2) "FIELD FFID"IS THE INSTRUMENT RESPONSE DURING 1 VIBRATION TEST AS RECORDED IN THE FIELD REEL (FIELD RECORD NUMBER)

(3) "LGTH MSEC" IS THE LENGTH OF THE RECORD IN MILLISECONDS ON THE FIELD TAPE.

(4) "SHOT"IS THE IDENTIFICATION NUMBER ASSIGNED TO A GIVEN FIELD FFID WHEN THE FIELD REEL IS DEMULTIPLEXED.

(5) "CHAN"IS THE ALLOCATION OF THE INSTRUMENT CHANNELS TO THE FIELD RECORDING SYSTEM.

(6) "FREQ"IS THE RANGE OF FREQUENCIES FOR A VIBRATION SWEEP OR THE FREQUENCY OF A DESCRETE LOADING.

(7) MULTIPLEXED INSTRUMENT VOLTAGE LEVEL RE- SPONSES ON THE FIELD TAPE (FFID###) ARE INPUT TO THE DISCO "DEMUX" ROUTINE TO OBTAIN THE SEQUENTIAL INSTRUMENT VOLTAGE LEVEL RESPONSES (ONE VOLTAGE LEVEL TIME SERIES PER INSTRUMENT) STORED ON THE "GOUT TAPE".

(8) "FHWA VIBRATORS"ARE A MATCHED PAIR OF MOTOR-DRIVEN ROTATING MASS VIBRATERS WHICH APPLY LINEAR SINUSOIDAL FORCE OF VARYING AMPLITUDE AND FREQUENCY.THEY WERE SUPPLIED BY THE FEDERAL DEPARTMENT OF TRANSPORTATION RESEARCH FACILITY.

(9) THE "WES VIBRATOR"IS A SINGLE LINEAR MOTION INERTIAL VIBRATOR DRIVEN BY A CLOSED LOOP ACTUATOR AND HYDRAULIC SYSTEM WHICH APPLIES A LINEAR SINUSOIDAL FORCE OF VARYING AMPLITUDE AND FREQUENCY.

IT WAS SUPPLIED BY THE ARMY CORPS OF ENGINEERS WATERWAYS EXPERIMENT STATION.

(10) THE FREQUENCY RANGES ("FREQ") BOUNDED BY ASTERISKS (EG. *90.0-70.0*) ARE THE ACTUAL FREQUENCY RANGES FOUND ON THE OUTPUT PLOTS, WHICH, IN THE CASE OF THESE RECORDS, DIFFERS FROM THE FREQUENCY RANGE RECORDED ON THE FIELD RECORD LOG.

APPENDIX G

DCASS 5 User's Guide

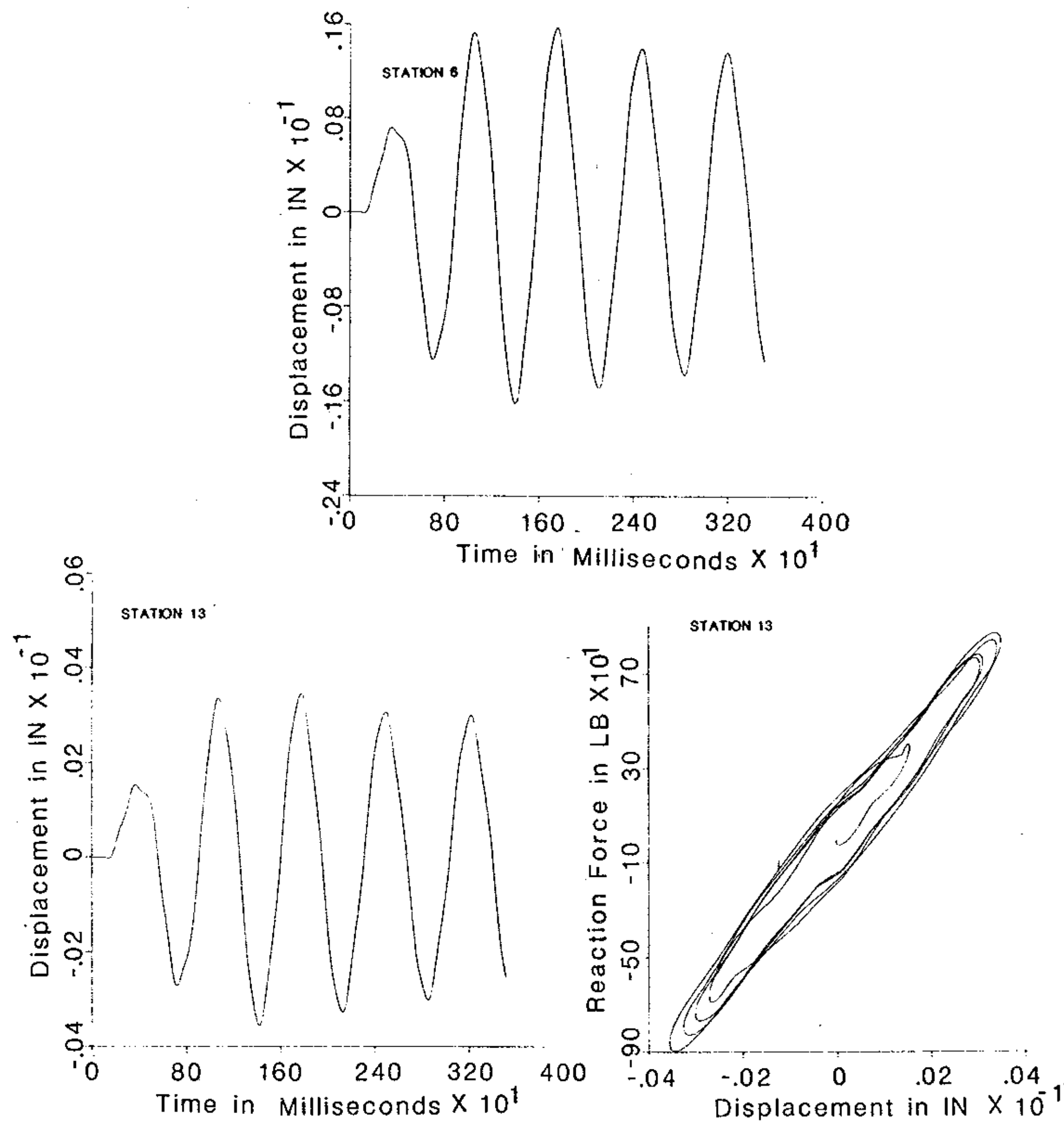


Fig. E.8. SPASM, Group-Horizontal Pile, P-y Set IV, f = 14 Hz (equal to approx. f_r), F_L = 889 lb/Pile. (1 in. = 25.4 mm; 1 lb = 4.45 N)

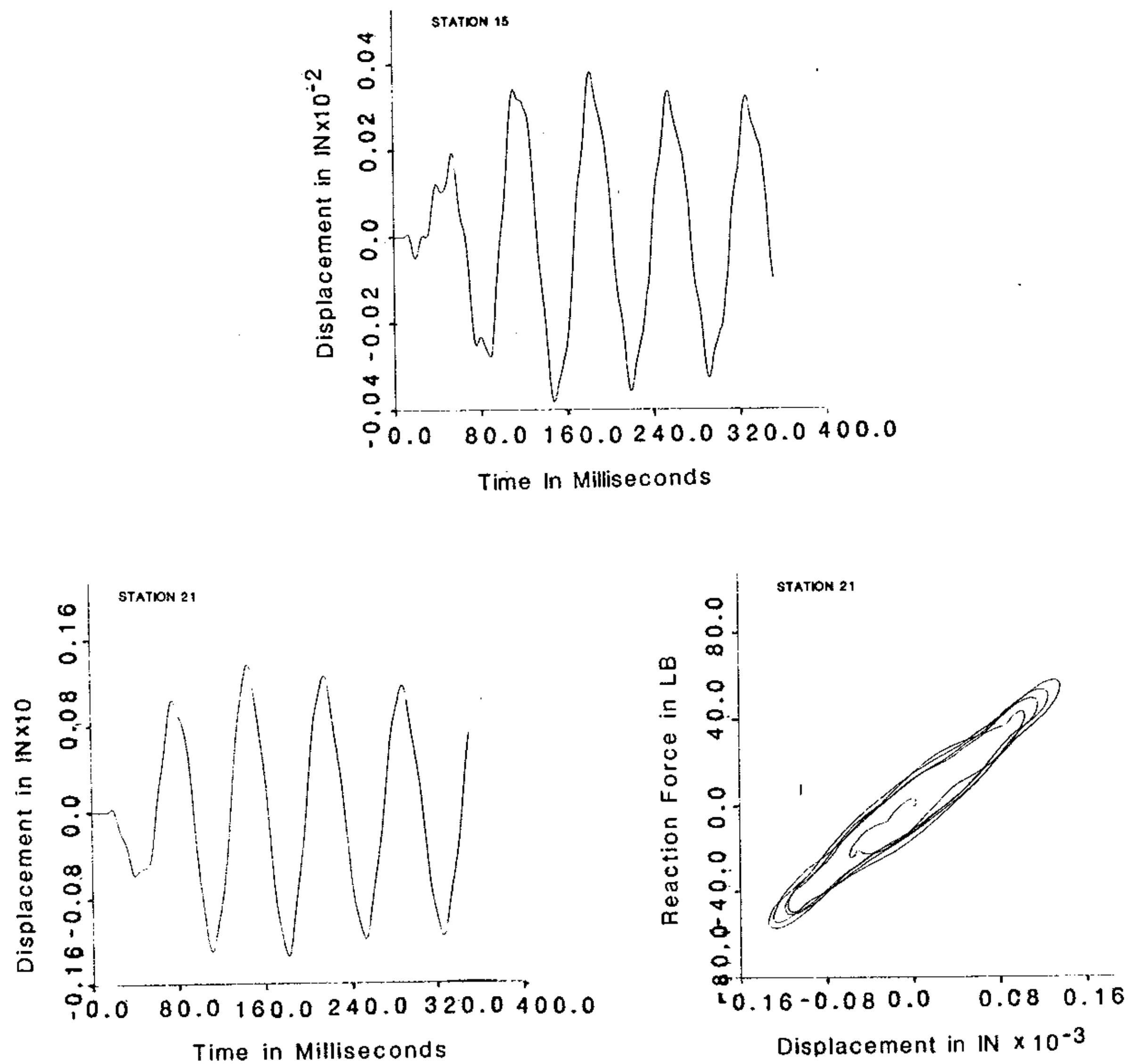

STATION 15
Displacement in INx10^-2
0.04
0.02
0.0
-0.02
-0.04
0.0
80.0
160.0
240.0
320.0
400.0
Time In Milliseconds
STATION 21
Displacement in INx10
0.16
0.08
0.0
-0.08
-0.16
0.0
80.0
160.0
240.0
320.0
400.0
Time in Milliseconds
STATION 21
Reaction Force in LB
80.0
40.0
0.0
-40.0
-80.0
-0.16
-0.08
0.0
0.08
0.16
Displacement in IN x10^-3

Fig. E.8. Cont'd.

EXPLANATION OF DCASS5 EXAMPLE OUTPUT - VIBRATION TESTS

Four test records are partially reproduced in the following figures: 1 each for single-vertical, group-vertical, single-horizontal, and group-horizontal tests. Only a few channels are shown. In all cases the load channel and pile-cap accelerometer in the primary direction of motion are included.

Each test consists of a set of three figures. The first figure is a "section" that reproduces the time histories of load and acceleration for six channels. The horizontal scale is time, in seconds, where only the first few seconds are reproduced. The following are also noted.

1. The instrument for each trace is identified to the left of the trace under the work "NAME." For example: INF4 is the applied load.

2. The units (in all cases SI) are noted under the word "UNITS." For example INF4 has the units of Newtons and the accelerometers (e.g., "AP21") have units of mm (millimeters)/sec^2(seconds squared).

3. The amplitude of instrument response is obtained from the number found beneath "SCALE MAX." For example, SCALE MAX for INF4 for the single-vertical record is 2.5000E + 04, which means that the line adjacent to the label represents a force level of 25,000 Newtons.

4. The minimum value (MINIMUM), maximum value (MAXIMUM), mean value (MEAN), and root mean square value (RMS) for each channel are also tabulated in the channel label.

5. Additional information in the channel label includes the real channel number (CHAN) and the sequential channel number (SEQNO), representing the actual order in which the real channel number appears on the tape. The auxilliary channels (CHANS 49 - 60) were sequential channels 1 -12. CHANS 1 -48 were sequential channels 13 - 60.

The second figure in each set contains the power spectra for the various instruments shown on the first figure. The labels are similar to those used in the first figure.

The third figure contains, in order, the transfer function between the applied force (INF4) and the instrument marked under "NAME," the phase in degrees between the force and instrument indicated above, the coherence of the above transfer function, the output power spectral density function (for the instrument marked under "NAME"), the input power spectral density function for the instrument marked under "NAME"), and the cross power spectral density function between the two instruments in question. The labeling follows the same scheme as described for the first figure.

The test represented on each figure can be identified by the indicated "SHOT." SHOT 2019 for the single-vertical test is illustrated here. SHOT 2019 is summarized in Appendix F.

It is pointed out that a single fully processed record (60 channels) consists of 10 plots of the first type, 10 plots of the second type, and 60 plots of the third type, or a total of 80 plots.

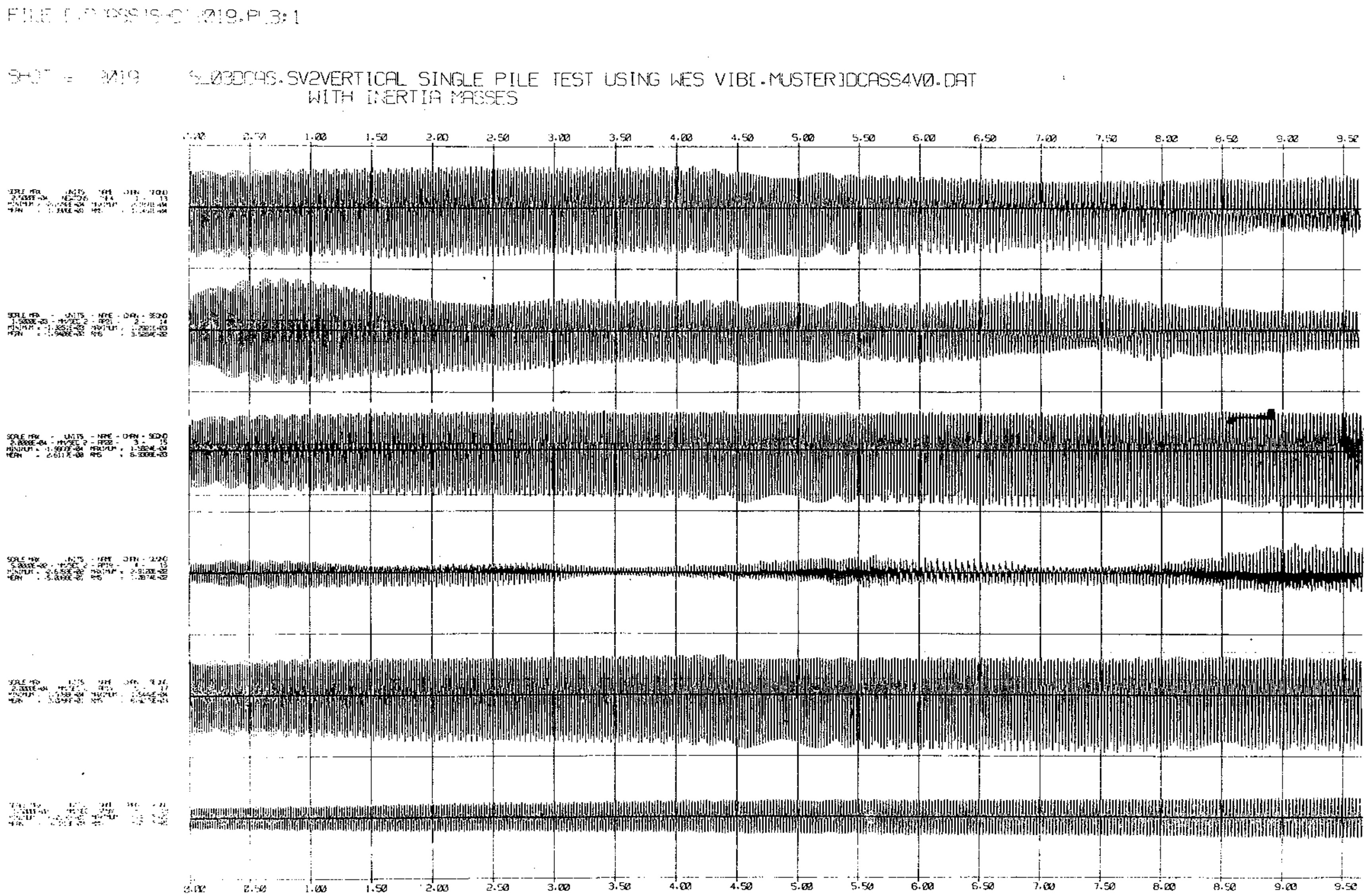


Fig. E.9. Single-Vertical Time Histories.

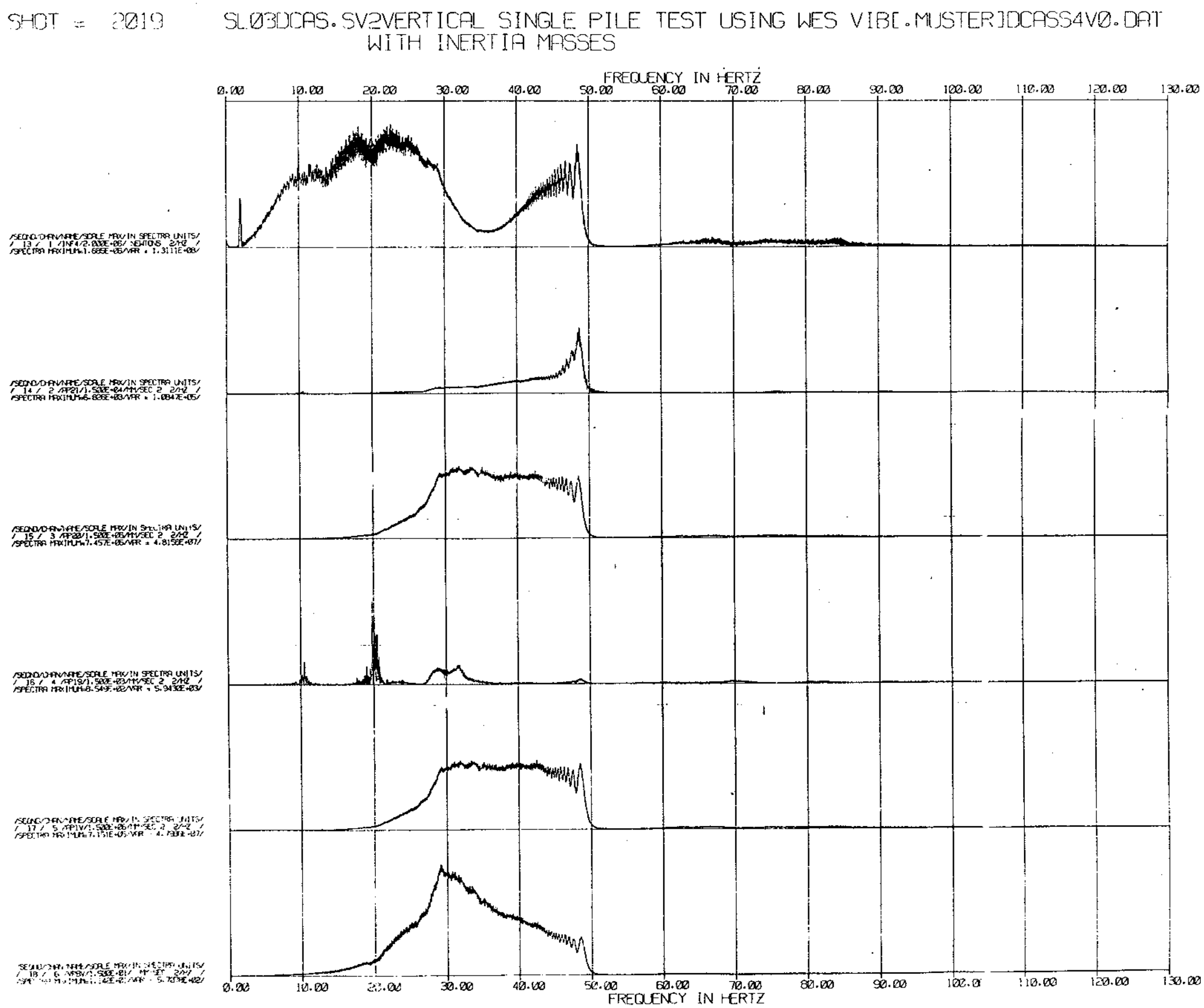


Fig. E.10. Single-Vertical Power Density Spectra.

SHOT = Ø

FILE [.DCASS]T16S2019.HSR

2019SNGL.SV2 VERTICAL SINGLE PILE TEST USING WES VIBRATOR DCASS5 / G. MUSTER
INERTIA MASSES ATTACHED TO VIBRATOR

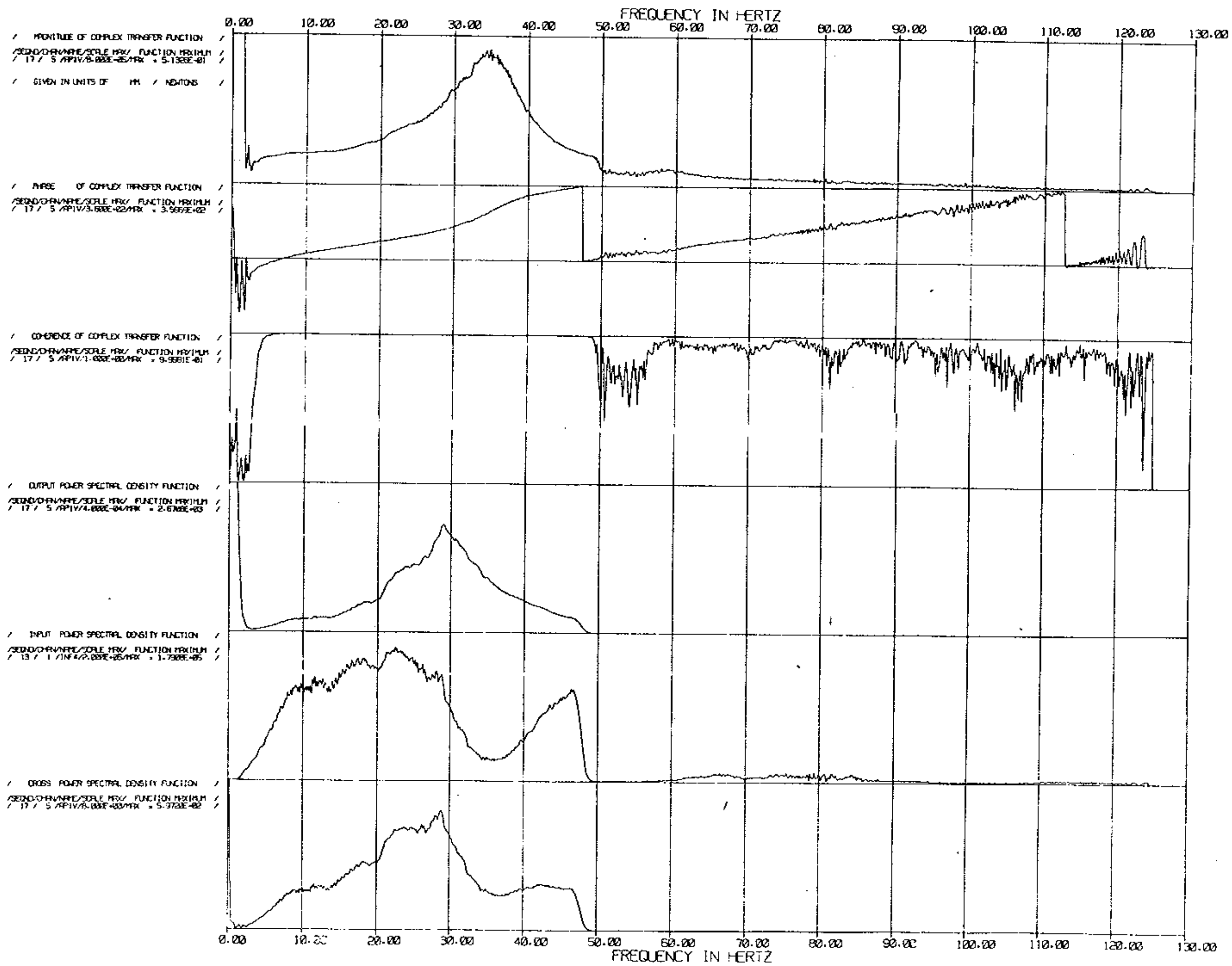


Fig. E.11. Single-Vertical Transfer Function.

FILE [.DCAS7]S13S2035.HSR

SHOT = 2035 GL12DCAS.G11 VERTICAL PILE GROUP TEST USING WES VIBRATOR

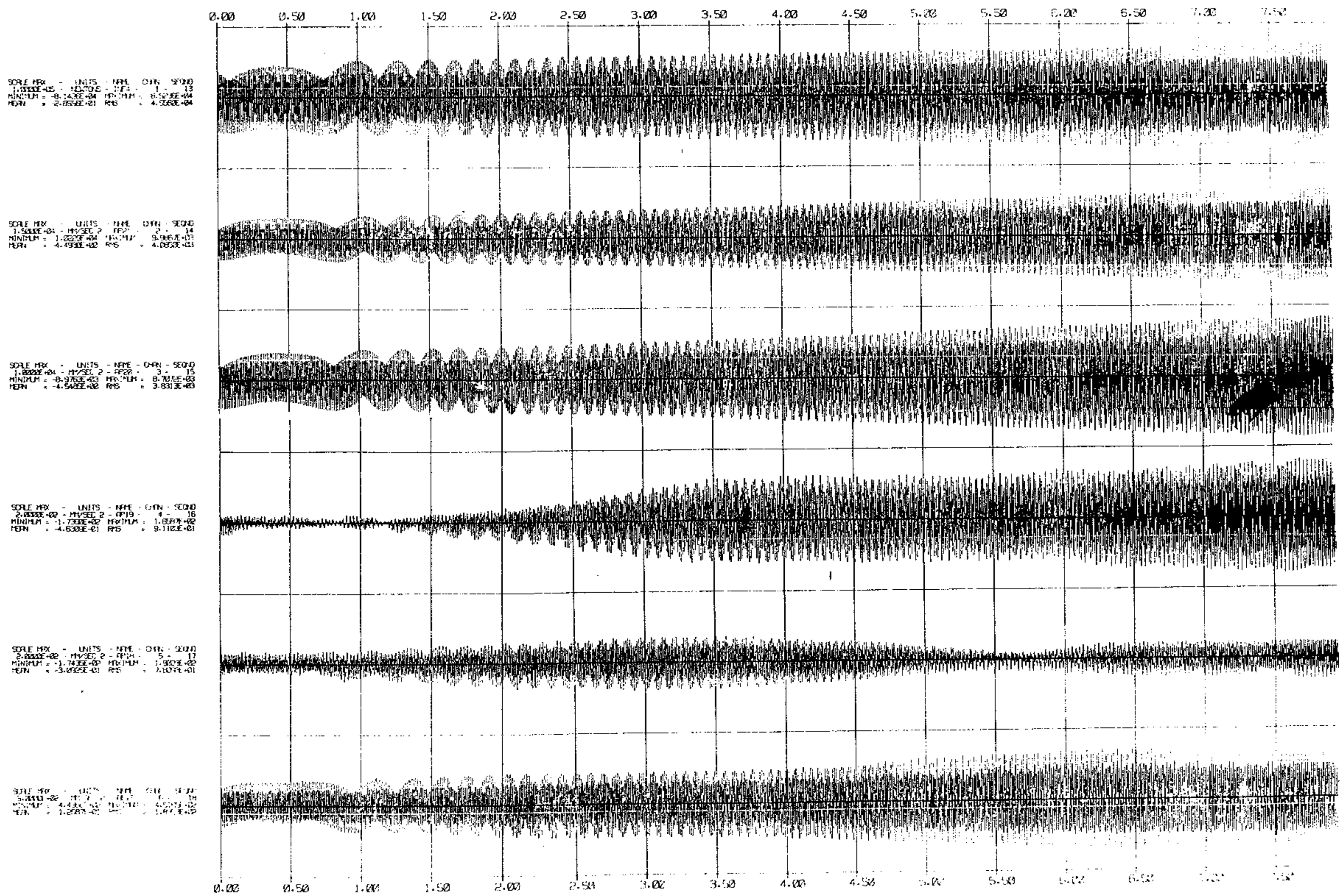


Fig. E.12. Group-Vertical Time Histories.

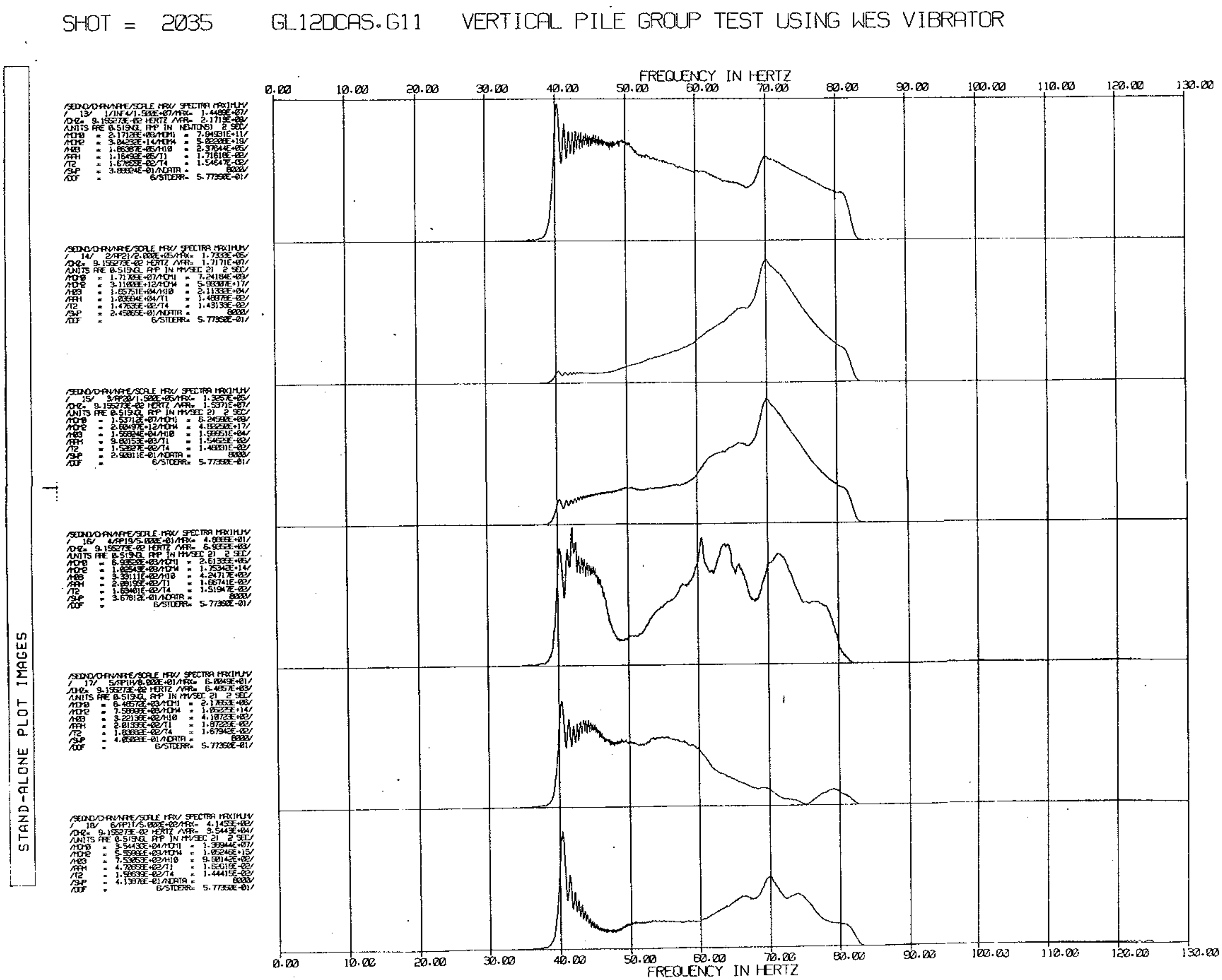


Fig. E.13. Group-Vertical Power Density Spectra.

FILE [.DCAS7]T16S2035.HSR

GL12 .G11 VERTICAL PILE GROUP TEST USING WES VIBRATOR

1001 RUNTITLE FIELD RECORD 642 - 50.0 TO 02.0 HZ 16,000 LB. - 8/17/81

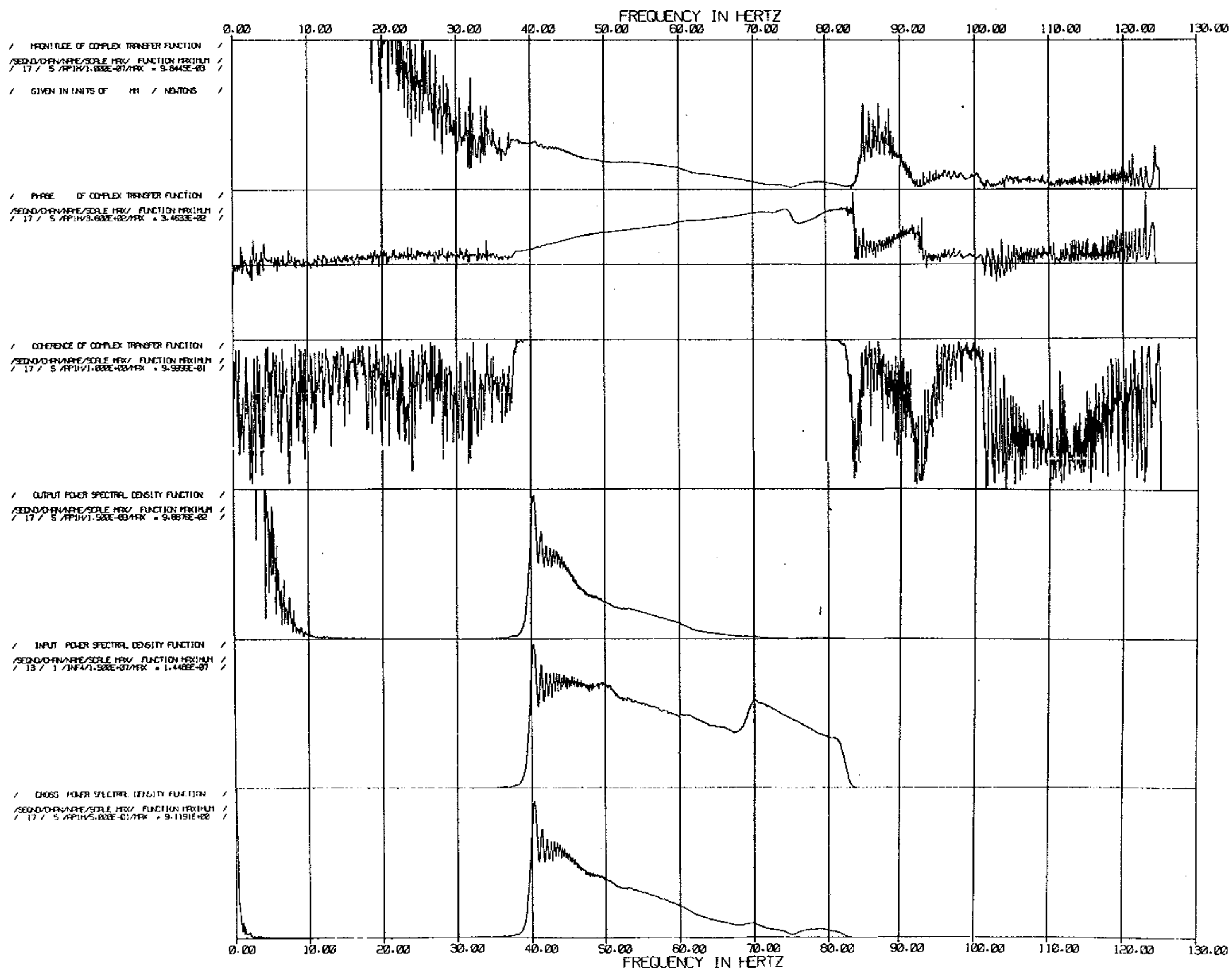


Fig. E-14. Group-Vertical Transfer Function.

FILE [.DCAS7JS13S5019.HSR

SHOT = 5019 SL04DCAS.SH1HORIZONTAL SINGLE PILE TEST USING WES VIBRATOR

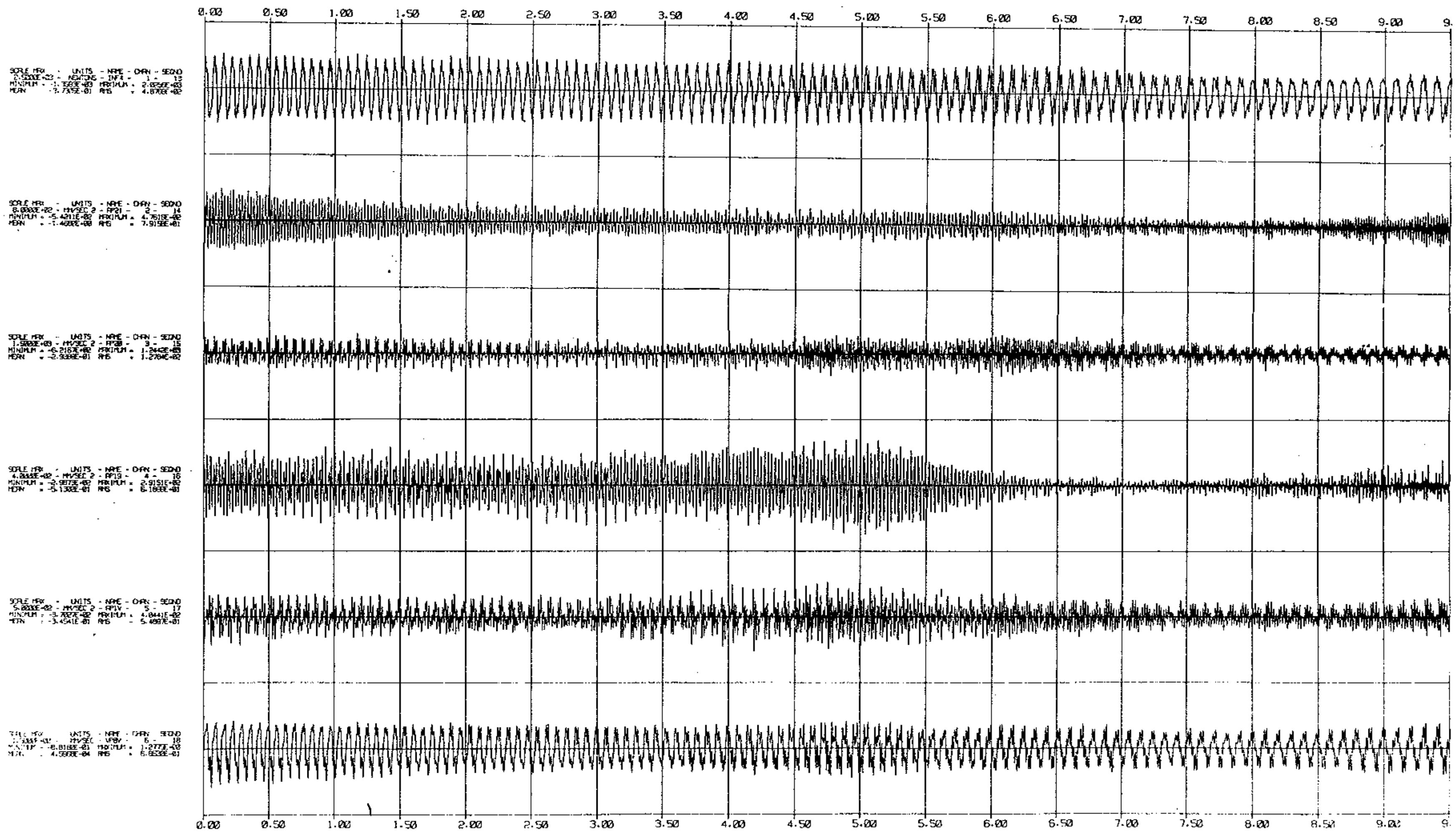


Fig. E.15. Single-Horiztonal Time Histories.

SHOT = 5019 SL04DCAS.SH1HORIZONTAL SINGLE PILE TEST USING WES VIBRATOR

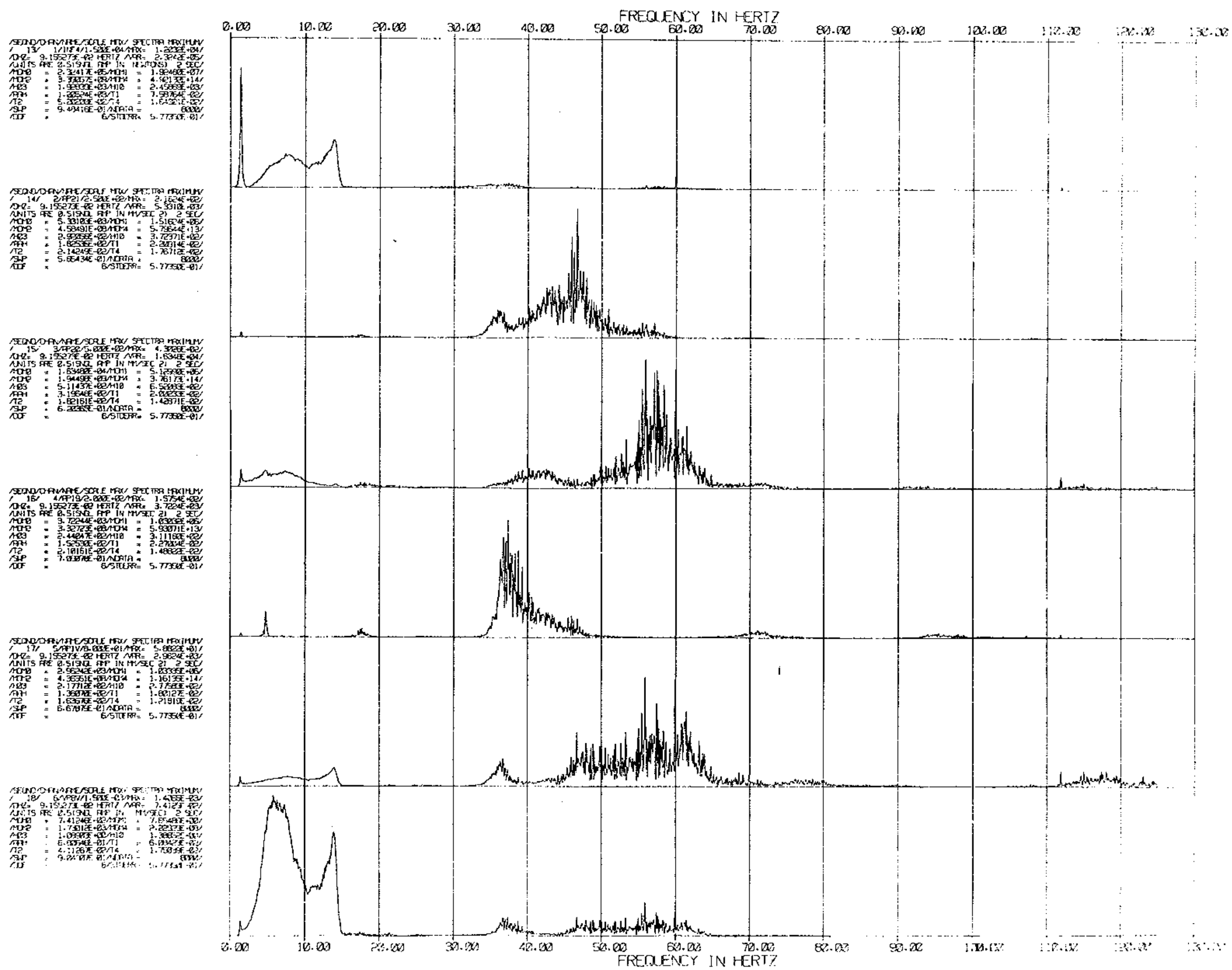


Fig. E.16. Single-Horizontal Power Density Spectra.

FILE [.DCAS7]T16S5019.HSR

SHOT = 5019   SL04   .SH1HORIZONTAL SINGLE PILE TEST USING WES VIBRATOR

1001   RUNTITLE   FIELD RECORD 832 - 50.0 TO 02.0 HZ   200 LB. - 8/20/81

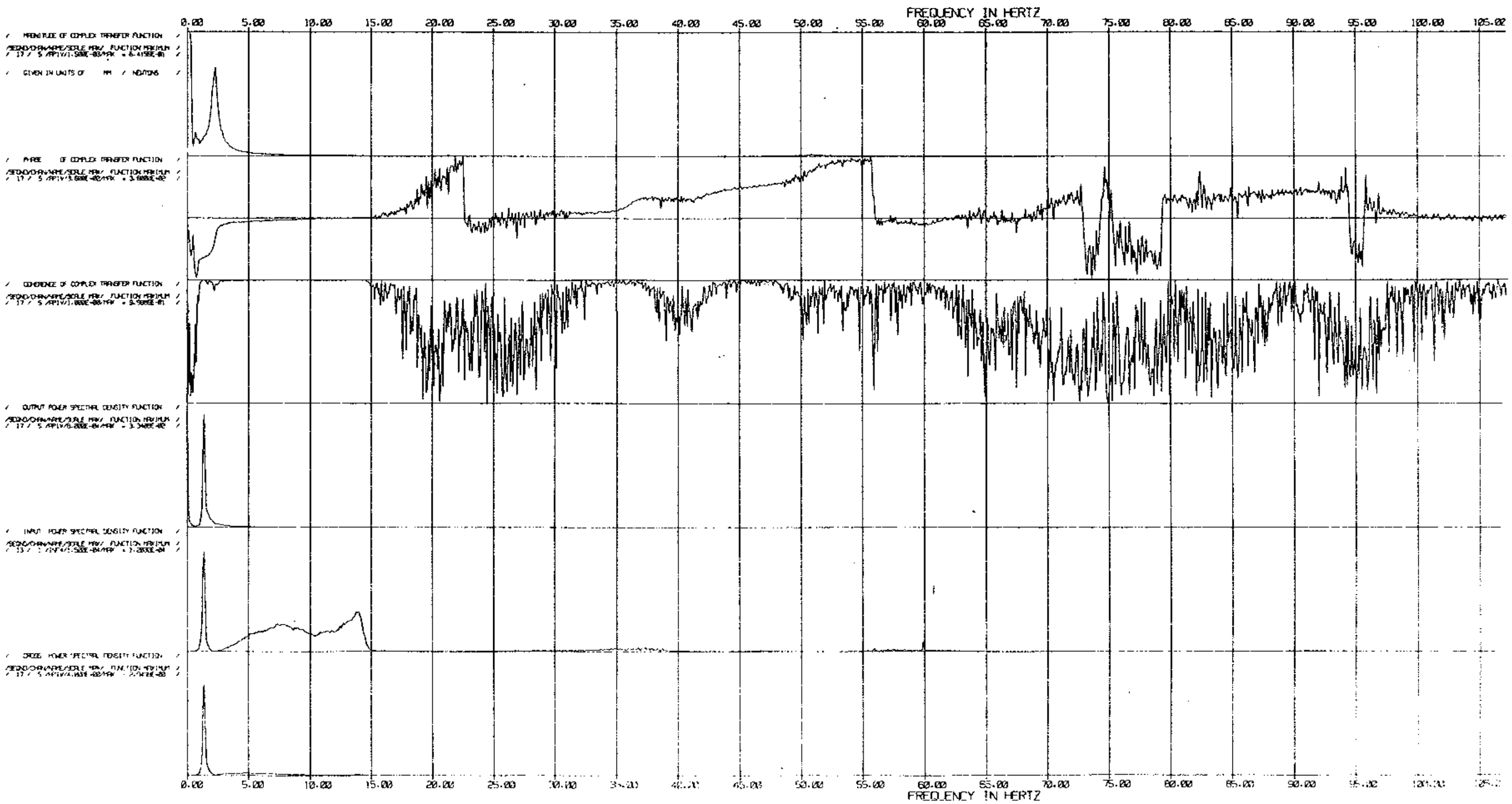


Fig. E.17. Single-Horizontal Transfer Function.

FILE [.DCAS7]S13S5002.HSR

SHOT = 5002   GL15DCAS.G14   HORIZONTAL PILE GROUP TEST USING WES VIBRATOR

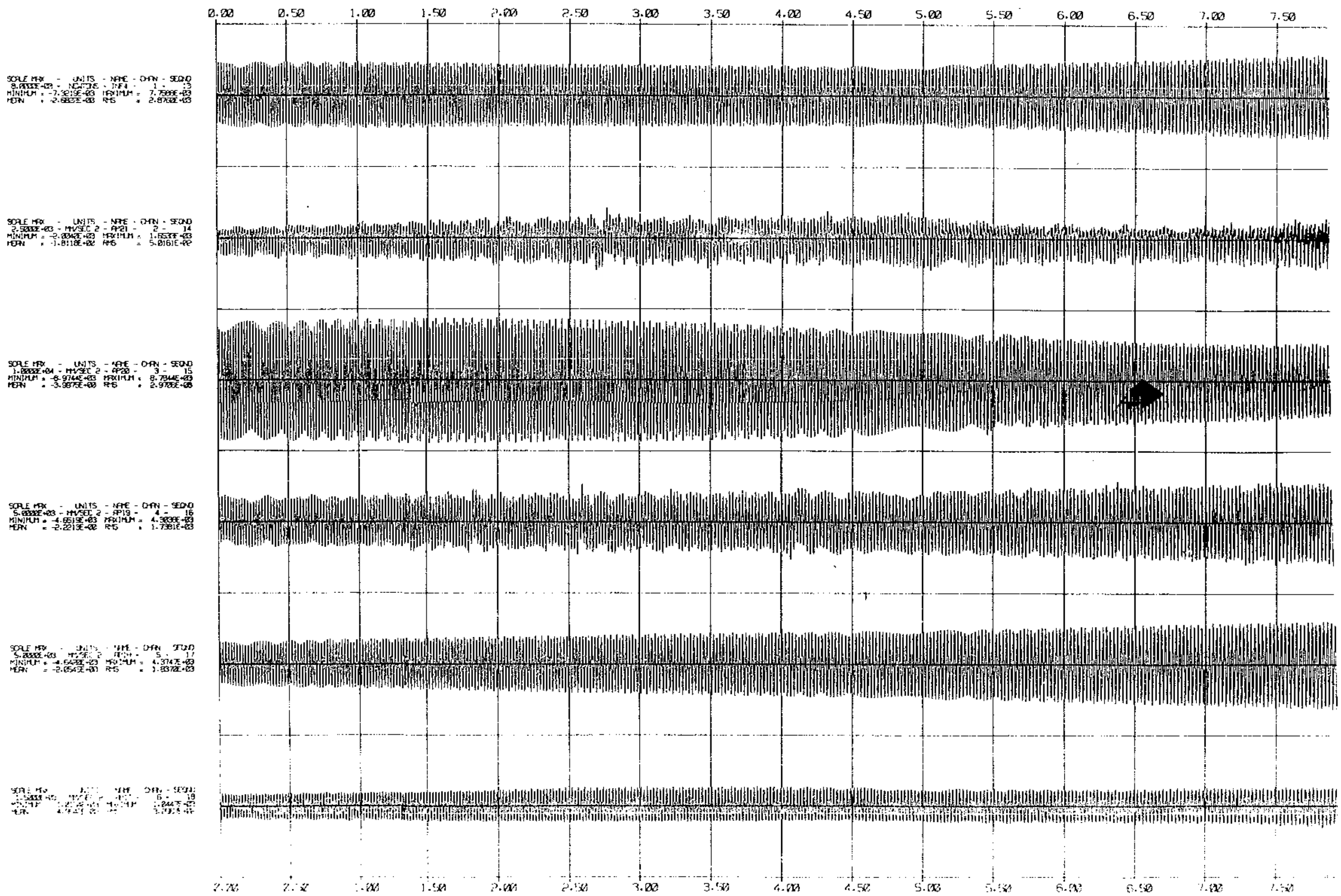


Fig. E.18. Group-Horizontal Time Histories.

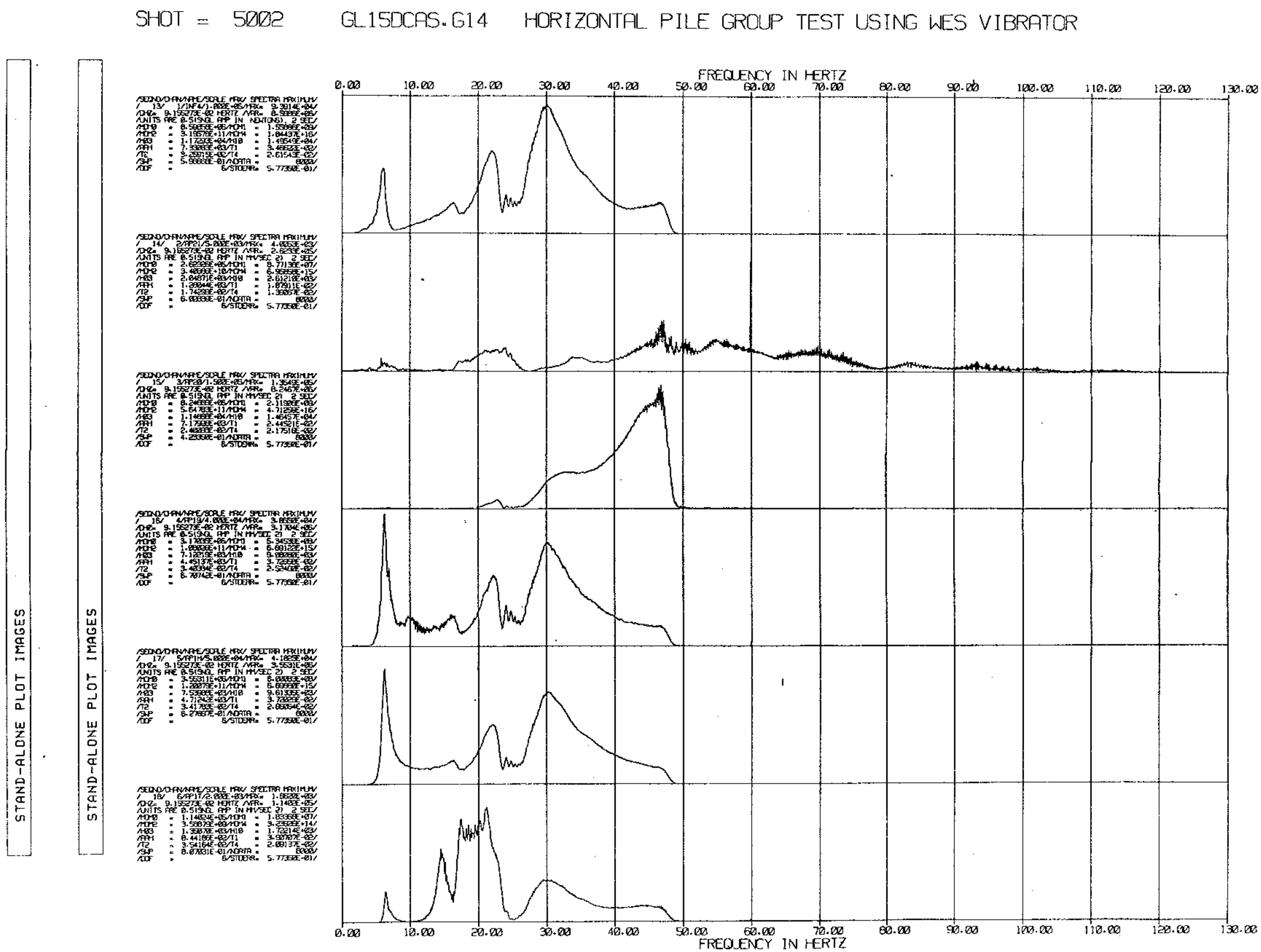


Fig. E.19. Group-Horizontal Power Density Spectra.

FILE [.DCAS7]T16S5002.HSR

SHOT = 5002 GL15 .G14 HORIZONTAL PILE GROUP TEST USING WES VIBRATOR

1001 RUNTITLE FIELD RECORD 802 - 50.0 TO 02.0 HZ 4,000 LB. - 8/19/81

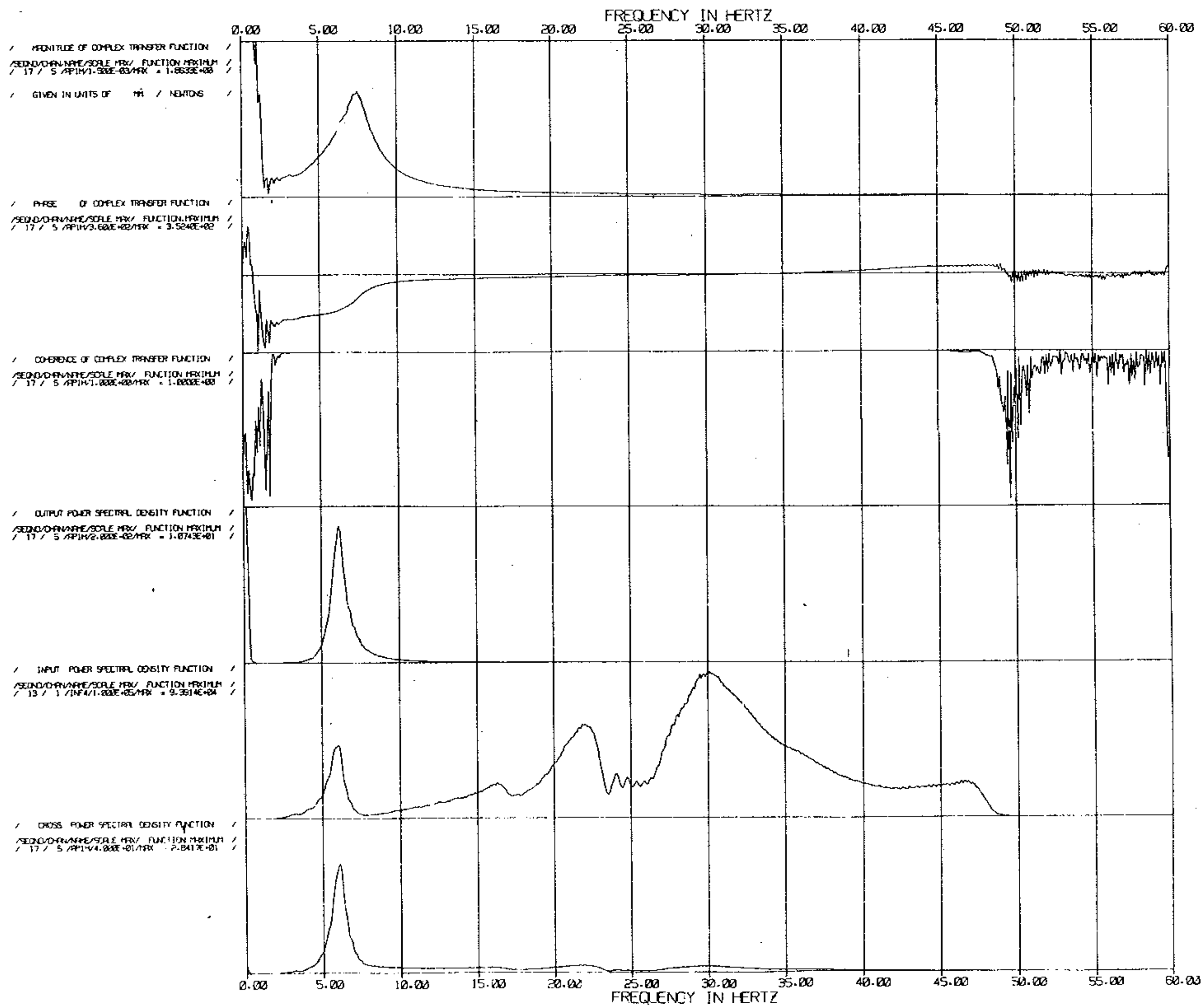


Fig. E.20. Group-Horizontal Transfer Function.

APPENDIX G

DCASS 5 User's Guide and Example Run

```
c
c
c
c
c
c
c        User's Manual for Computer Program DCASS5
c
c
c
c        December 31 1982
c
c
c
c        Data Collection and Analysis Software System V
c        ---------------------------------------------
c
c        Developed in partial fufillment of a MSME
c        Masters Thesis
c
c        By Gordon Lewis Muster II:
c        Research Scientist at Battelle Houston Operations
c        and MSME graduate student at the
c
c        University of Houston
c
c        Mechanical Engineering Department
c
c        Houston, Texas     77001
c
c
c
c
c        developed in consort with:
c
c            the Civil Engineering Department's
c            Geotechnical Engineering Laboratory
c            Dr. Michael W. O'Neill, and Geoffrey W. Blaney
c
c            the Electrical Engineering Department's
c            Research Computation Laboratory and
c            Real-Time Computing Laboratory
c            Sesmics Acousistics Laboratory
c            Dr. Glover and Rudy Charest
c
c            and with the support of
c            Battelle Houston Operations
c            Structures and Mechanics Department
c            2223 West Loop South
c            Houston, Texas  77027
c            713 877-8034
c
c
c
```

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```

Introduction

DCASS5 is a program written in Fortran for a host DEC VAX 11/780 32 bit main-frame mini-computer to be used in the analysis of dynamic data as might be obtained by placement of transducers such as accelero meters, geophones, strain gages, etc., on a structure undergoing forced harmonic , transient or random excitation founded on or embedded in soil media. Another possible application of DCASS5 is in the display and comparision of frequency and time domain solutions for such structures as might be obtained by rigorous analytical, finite difference and finte element solutions.

DCASS5 Version 1.0 A is a highly modular program and consists of a main program and a large number of general purpose subroutines designed for specific digital signal processing functions. The program uses state of the art digitial signal processing techniques which can be found in the recent literature (1,2,3,4). This program is an extension of an experimental digital signal processing program DCASS4 written for a DEC PDP-11/70 16 bit mini-computer. While creating DCASS4 many of the basic subroutines and algorithms which may be found in DCASS5 were created and easily tested. The initial testing of subroutines used in DCASS5 was conducted at the University of Houston Cullen College of Engineering Real-Time Computing Laboratory which operates a PDP-11/70 with FFP, 256K Core & 67 MBYTE DISK.

Program DCASS5 Version 1.0A was developed at the University of Houston Research Computation Laboratory which operates a 32 bit VAX 11/780 mini computer with 6 advanced tape drives, two array processors, two 50 megabyte hard disk drives, line printer, high resolution electrostatic plotter, very good interactive terminal support and 4 dial up modem lines. This computer was developed to primarily to operate as a seismic data processing center whose primary user is the Seismic Acoustics Laboratory(SAL).

This VAX minicomputer was installed and is supported by Digicon,Inc. Houston, Texas, and consequently supports the seismic data processing software package named DISCO(5). Conversion of field tapes generated by a seismic data collection field unit to a form readable by DCASS5 are performed by DISCO programs DEMUX and GOUT. In program DCASS5 these tapes are read by FORTRAN callable subroutines developed in support of the DISCO program suite. These subroutines enable very long record lengths to be read from tape, and are only required when the data is initially read by

```
c
c
c
c
c
c     program DCASS5 and converted to the fixed record length format
c     used by DCASS5.  Similar tape subroutines could be developed
c     for a VAX minicomputer which does not support DISCO, though
c     this would depend on the maximum record length that the
c     system magnetic tape drives can read.
c          Presented hereon is a detailed description of what DISCO
c     operations are required to convert multiplexed field tapes to
c     a demultiplexed seismic tape format which is compatible with
c     DCASS5 version 1.0A.  Also a detailed description of what
c     operations program DCASS5 can perform, how these operations
c     are performed, file and command card formats, and a set of
c     example computer runs which illustrate the use of DCASS5 in
c     a step by step manner.
c          At the present time DCASS5 Version 1.0A will only
c     execute on a Vax computer.  A smaller PDP11/70 version
c     could be created with relatively minimal effort.
c     Conversion to computers such as IBM, CDC, Honeywell, etc.
c     would be more difficult due to the large amount of code
c     associated with tape and disk file operations.  DCASS5
c     is a very large program and consists of over 3000 FORTRAN
c     statements and uses various CALCOMP plotting and DISCO
c     tape library routines.  Though the structure of DCASS5
c     is very modulor, command language relatively simple
c     and documentation adequate, proper use of program DCASS5
c     and this manual would at a minimum require attendance of
c     a two day workshop sessions followed by 16 hours of
c     telephone consultation, available through the author.
c     Program DCASS5 is still considered experimental in nature
c     and should bot be used for design purposes without further
c     verification.  Commands exist that at this time have not
c     been adequately debugged.  Commands which have been not,
c     or inadequately, verified are described on last Appendix.
c
c
c
c
c
```

```
c
c
c     Signal Processing Calculations Performed by DCASS5 Version 1.0A
c     ----------------------------------------------------------------
c
c
c           Program DCASS5 Version 1.0 A has provisions
c     for reading raw data files and then performing the
c     following computations.
c
c              (1) calibration from voltage to engineering
c                  units
c
c              (2) basic time domain statistics
c
c                      a. minimum
c                      b. maximum
c                      c. mean
c                      d. slope
c                      e. average peak value
c                      f. root mean square
c                      g. variance
c
c              (3) power spectral density functions
c
c                      a. auto
c                      b. cross
c
c              (4) single input single output ( SISO )
c                  transfer functions
c
c                      a. magnitude
c                      b. phase
c
c              (5) coherence function
c
c              (6) six generalized cross-correlation functions
c
c                      a. normal
c                      b. PHAT function
c                      c. SCOT function
c                      d. impulse response function
c                      e. H-T(t) function
c                      f. Eckhardt function
c
c              (7) data trace filtering
c
c                      a. Ormsby lowpass
c                      b. Ormsby highpass
c                      c. Ormsby bandpass
c                      d. Ormsby band reject
c                      e. user supplied
c
c              (8) spectral statistical properties
c
```

```
c
c
c      DCASS5 Version 1.0 A Output Products
c      ------------------------------------
c
c
c      Output products which DCASS5 Version 1.0 A may
c      generate include:
c
c                (1) command card echo listings
c
c                (2) setup,calibration and site geometry data
c                    echo listings
c
c                (3) file management data listings
c
c                (4) memory management data listings
c
c                (5) trace domain statistics listings
c
c                (6) CALCOMP plots of each trace in both
c                    the time and frequency domain
c
c                (7) CALCOMP plots of SISO transfer function
c                    magnitude and phase, coherence and
c                    cross-spectral density functions between
c                    any two traces
c
c                (8) CALCOMP plots of six generalized
c                    cross-correlation functions
c
c                (9) DCASS5 command execution summary
c
c               (10) DCASS5 'RAW' data files
c
c               (11) DCASS5 'FFT' data files
c
c               (12) CALCOMP plots of filter frequency responce
c
c               (13) listings of vector values
c
c               (14) listing of probability density
c                    functions, normalized and actual
c                    histogram cell count
c
c               (15) listing of SISO transfer magnitude and phase,
c                    auto and cross-spectral amplitude functions
c                    and coherence
c
```

```
c
c
c
c
c
c
c      Seismic Format Tape Generation
c      ------------------------------
c
c
c         The raw dynamic data (field records) must be stored
c      on disk or magnetic tape in a specfic DCASS5 compatible
c      form. Alternately,  the raw dynamic data may be stored
c      on magnectic in a form similar to formats currently being
c      used by the sesmic data processing community. This
c      alternate format, which is very efficent in its usease of
c      magnetic tape, requires the host computer to have the
c      ability to read very long records ( one record per data
c      trace) . This alternate format will hereafter be denoted
c      the sesmic format to distinuish it from the DCASS5
c      fixed record length format.
c         DCASS5 Version 1.0 A was developed at the University
c      of Houston on the VAX-11/780 computer used by the Sesmic
c      Acoustics Laboratory. A sesmic data processing software
c      package named DISCO ,supplied by Digicon Inc. (5) ,
c      has been successfully installed on this computer. The
c      DISCO software package has within its suite of programs
c      the ability to produce the sesmic format raw data tapes
c      which DCASS5 Version 1.0 A can process. Special FORTRAN
c      tape function subroutines are provied within the DISCO
c      software package which DCASS5  Version 1.0 A utilizes
c      to read the very long records used by the sesmic format.
c          The Society of Exploration Geophysics (SEG) have
c      established format for seismic field tapes thereby
c      standardizing tape formats used by the seismic data
c      aquisition and analysis industry.  This has enabled the
c      reduction of developement cost for seismic software systems
c      and facilitated the transfer of data between seismic data
c      analysis computer centers around the world.
c          The seismic data format tape used by program DCASS5
c      version 1.0A is created by the DISCO program GOUT.  The
c      format for this tape is similar to the popular SEGY trace
c      sequential format established by SEG(6).  Field tapes ,
c      such as that would be obtained from an older seismic data
c      collection system might be in multiplexed format and would
c      require demultiplexing to trace sequential format by the
c      DISCO program DEMUX prior to tape output by GOUT program.
c
c
```

```
c
c
c
c
c
c          In the application for which this program was first
c     utilized the raw field tapes were generated by a Texas
c     Instruments DFS III seismic data collection system.  The
c     field tape format used by this system is the older SEGA
c     format (7).  If the field data is already in a trace
c     sequential format, such as SEGY, the data tapes could be
c     read by DISCO program GIN and subsequently output to tape
c     in the seismic format compatible with DCASS5 version 1.0A.
c     by DISCO program GOUT.
c          The seismic format data tapes generated by DISCO
c     program GOUT and used by program DCASS5 version 1.0A utilizes
c     a trace sequential format.  Each tape begins and ends with
c     two end-of-file-(EOF)marks.  More than one field record may
c     be stored on a tape.  When the tape is generated each field
c     data record sequentially written is assigned a SHOT number
c     by program GOUT.  The SHOT numbers corresponding to field
c     record numbers on each tape are sequential with the first
c     SHOT number selected by the user.  Field record numbers need
c     not be sequential .  Each trace is preceeded by a 256 byte
c     trace header record.  Each data trace is stored as one single
c     record following its respective trace header.  The VAX 32-bit
c     FORTRAN floating point data format is used in the storage of
c     the trace vectors on tape.  This differs from the SEGY format
c     which uses the IBM 32-bit floating point data format.  Also
c     the SEGY format uses a 240 byte trace header.
c          The locations that various variables are stored within
c     the DCASS5 compatible GOUT generated trace headers and include
c     variables which directly correspond to the locations of the
c     same variables within the SEGY trace header.  These variables
c     are stored at the following locations within each trace header
c     record.
```

Variable	Location	Description
IFFID	3	Field Record Number
IICHAN	4	Logical Channel Number
IUSAMP	46	Number of Samples per Trace
IIRATE	47	Sample interval in microseconds
ILASTR	48	Set to 1 if last trace. Equal 0 if not.
IISEQN	49	Sequential Channel Number
IITYPE	50	Equals 1 if data trace is an auxilary channel. Equals 0 if not.
IISHOT	51	Assigned SHOT Number
IYEAR	52	Year of DEMUX
IMONTH	53	Month of DEMUX
IDAY	54	Day of DEMUX

Each variable is stored as a 32-bit integer at the locations given. The other locations within the 256 byte trace header are not used at this time but could be set equal to the full SEGY trace header variable set if program DCASS5 were modified to support the SEGY format. In general only variables IFFID, IICHAN, IISEQN, IISHOT are used by program DCASS5 version 1.0A.

Example Computer Run One given in Appendix B illustrates the process of SEGA to GOUT tape format conversion necessary for analyizing data obtained with a DFS III field recorder used by the author in the first application of program DCASS5 version 1.0A. This process utilizes DISCO programs DEMUX and GOUT. Similar procedures could be used at seismic data processing centers which do not support DISCO.

Program Flow

DCASS5 utilizes channel setup, calibration and site geometry data files which are user-generated for a specific field record (or SHOT).DCASS5 then sequentially reads a series of command card images which determine the path or 'thread' to be used in the execution of the program for a specific analysis process to be performed. By making provisions for certain 'ANALYSIS' command card images to be stored in main memory, conditional branching and looping on the command cards stored in memory is made possible which simplifies multi-channel operations and reduces the number of command card images needed (80 characters each) for such operations.

Main FORTRAN program DCASS5 has been programmed to provide maximum ease of support and variation of use and program flow. Each signal processing function or file command has been separated into a small independent section of code which is only executed after the selection, input and error free decoding of the proper DCASS5 command card image. Program flow path is determined largely by the sequence of cards presented to the DCASS5 command proccessor. The DCASS5 main program command processor executes through the following steps after the DCASS5 executable image is RUN.

STEP 0. Initialize logic and counter variables

STEP 1. Obtain next DCASS5 command card image from one of the following:
- a.) default input device
- b.) keyboard input if run interactive
- c.) DCASS5 Execution Command File
- d.) DCASS5 Analysis Command File

STEP 2. Decode first 16 characters of DCASS5 command card and determine DCASS5 line number and command name

STEP 3. Jump to selected DCASS5 command code

STEP 4. Decode last 64 charecters of DCASS5 command card image.

STEP 5. Execute command.

STEP 6. Repeat steps (1) through (5) untill DCASS5 STOP or EXIT command card executed.

```
c
c
c
c     DCASS5 Memory Mangement and Data File Format
c     --------------------------------------------
c
c
c       Though program DCASS5 contains many signal proccesing
c     functions, most of the digitial signal processing
c     functions and variables are contained within a very limited
c     number of memory vectors. To facilitate efficeint memory
c     to data file input/output transfers, the format for DCASS5
c     data files is very similar in form and order to the memory
c     allocation found within program DCASS5. The three vectors
c     listed below will contain all the variables found within a
c     DCASS5 data file:
c
c
c     IF4HDR(LFHDR)  - DCASS5 data file header  vector
c
c     MT4HDR(LMTHDR) - DCASS5 multiple trace header vector
c
c     VVS(LVV   )    - DCASS5 main computational  vector
c
c
c     where the dimensions of the above memory vectors are
c     determined by a PARAMETER statement within the main program.
c     For program DCASS5 Version 1.0 A the dimensions of these
c     memory vectors are as given below:
c
c
c             LFHDR  = 1024
c
c             LMTHDR = 4096
c
c             LVV    = 32768
c
c
c        Individual variables and vectors are allocated space
c     within memory vectors LMTHDR and LVV when the 'FFTSIZE'
c     command is executed. This command determines the size
c     of the Fourier Transform used by the program. This
c     command therefore sets the maximum data trace size.
c     This command also sets the value of all integer-valued
c     memory pointers which provide the index or address
c     of the variable within memeory vectors MT4HDR and LVV.
c     The table of memory pointers is stored within the file
c     header, memory vector IF4HDR . When the FFTSIZE command
c     is executed a table of memory pointer values is computed
c     and then listed in the command echo file. The following
c     tables give the details of the names of the pointers and
c     a description of the variables that they point to. Each of
c     the following pointers are computed by DCASS5 command FFTSIZE.
c
```

```
c
c      Virtual Memeory Pointers for Array LVV
c      -----------------------------------------
c
c      IG11  - Spectral Density Function for Vector 1
c      IG22  - Spectral Density Function for Vector 2
c      IQ12  - Imaginary Part of Cross Spectral Density
c      IC12  - Real      Part of Cross Spectral Density
c      IP12  - Phase of Cross-Spectral Density Function
c      IG12  - Magnitude of Cross-Spectral Density Function
c      IH12  - Magnitude of Transfer Function Between 1 and 2
c      ICOHR - Coherence Between Vector 1 and 2
c
c      DCASS5 Trace Header Variables
c      ----------------------------
c
c      INAM   - Four (4) character transducer name
c      ICALB  - Four (4) character calibration file code
c      ICALCO - Calibration Data ( time and voltage)
c         (1) - Demultiplexer deskew time
c         (2) - Nominal trace weight(voltage per A/D bit)
c         (3) - Fraction of nominal trace weight factor obtained
c         (4) - Zero offset in voltage
c      ISCALC - Calibtration factor (voltage to engineering units)
c      IGFX   - Final scale factor obtained from values in ICALCO
c      IGZERO - Final zero offset obtained from values in ICALCO
c      IISCRD - Channel used to calibrate transducer
c      IICFLT - Amplifier compensation filter number
c      IINDEG - expansison space
c      ICUNT  - Eight (8) character channel units
c      IJSEQF - Sequential file number
C      IISKPC - Set to 1 if trace calibrated /  0 if not
C      IIZTYP - Integer-valued index which descibes the type of units
c      IZPOS  - Position vector  (x,y,z)
c      IZDIR  - Direction cosine vector  (x,y,z)
c      IGLINE - Three (3) possible eight (8) character geometry lines
c      ISTAT  - Trace time domain statistical values
c         (1) - minimum value
c         (2) - maximum value
c         (3) - mean value
c         (4) - slope
c         (5) - aveage peak value
c         (6) - root mean square value
c         (7) - variance
c         (8) - expansion space
c      ISTATA - Average trace time domain statistical values
c         (1) - average  minimum value
c         (2) - average  maximum value
c         (3) - average  mean value
c         (4) - average  slope
c         (5) - average  aveage peak value
c         (6) - average  root mean square value
c         (7) - average  variance
c         (8) - expansion space
```

```
c
c      IABMIN - Absolute minimum for trace or trace segments
c      IABMAX - Absolute maximum for trace or trace segments
c      IIABMN - Index in time for absolute minimum
c      IIABMX - Index in time for absolute maximumm
c      IPDFMX - Maximum range in given trace units of the  Probability
c               Density Function (PDF)
c      IPDFDX - Cell width in given trace units of PDF
c      IREMV  - Integer valued number which determines if the mean
c               and slope are removed from data trace
c      IKCLAS - Integer number of classes for PDF
c      IPDF   - Probability Density Function (PDF)
c      IGVAR  - Spectral density derived variance for trace
c      IGARA  - Averaged spectral density devitred variance
c      IGMAX  - Maximum value of spectral density for trace
c      IGMXHZ - Frequency in Hertz for maximum value
c      IMOM   - Spectral moments 0,1,2,4
c          (1) - zero spectral moment
c          (2) - first spectal moment
c          (3) - second spectral moment
c          (4) - fourth spectral moment
c      IWAVE  - Spectral density derived statistics
c          (1) - significant 1/3 peak to peak value
c          (2) - significant 1/10 peak to peak value
c          (3) - average apparant peak to peak value
c          (4) - average mean period (significant 1/3 period)
c          (5) - mean apparent zero crossing period
c          (6) - mean apparent period between creasts
c          (7) - spectral width parameter
c          (8) - expansion space
c      ICOVAR - Covaraiance between vector 1 and 2
c      ICOVRA - Averaged covariance
c      IG12VR - Cross-Spectral Density devired covariance
c      IG12MX - Maximum of Cross-Spectral Density Function
c      IG12HZ - Frequency in Hertz for maxminum value
c      IP12MX - Maximum value of Cross-Spectral Density Function
c               (Transfer Function) Phase in degrees
c      IP12HZ - Frequency in Hertz for maxmimum value
c      IH12MX - Maxmimum value of transfer function magnitude
c      IH12HZ - Frequency in Hertz of maximum value
c      ICOHMX - Maximum value of coherence function
c      ICOHHZ - Frequency in Hertz of maximum value
c      IRTYPE - Integer which determines the type of cross-correlation
c               function to compute
c      IRNLAG - Integer number of points to lag for cross-correlation
c      IR12MX - Maximum value of cross-correlation function
c      IR12DT - Time value at which maximum value of cross-correlation
c               function was found
c      IRTIMX - Maximum time of computed cross-correlation function
c      IRTIMN - Minimum time of computed cross-corelation function
c      IRSTRT - cross correlation starting index point
c      IREND  - cross correlation ending index point
c
c
```

```
c      Each DCASS5 data file has a format very similar to the
c   memory allocation used by the DCASS5 program. The data files
c   consist of a set of sequential fixed length records.
c   Record length is one thousand and twenty-four (1024)
c   thirty-two (32) bit computer words. The first record in each
c   file has been allocated as the file header record and contains
c   the information listed below.
c   The first subset of variables is established by the DCASS5
c   TAPETYPE command and stored within the file header record
c   at the locations enumerated below.
c
c   REELI  - input  reel name.............................   1
    DENS   - input  reel density..........................   3
c   FORMAT - format  name.................................   4
c   CLINE  - line    name.................................   6
c   NDTPFR - number of data traces per ensemble ..........   9
c   NATPFR - number of aux  traces per ensemble ..........  10
c   NCHAND - number of total traces per ensemble .........  11
c   IIUSEC - sample interval in microsec for reel  file ...  12
c   NDATAT - samples per data trace  for reel  file .......  13
c   NSHOTR - number of shots .............................  14
c   SHOTS  - shot # at start of reel .....................  15
c   SHOTE  - shot # at  end  of reel .....................  16
c   NENSMB - number of ensembles .........................  17
c   ISTACK - if traces are stacked = 1 / if not = 0 .......  18
c   NRLHR  - number of records in reel header ............  19
c   LABR   - number of bytes in trace header..............  20
c   NRRBOR - number of bytes on reel......................  21
c   NRRBPT - number of bytes   per trace .................  22
c   NRRBPE - number of bytes   per ensemble ..............  23
c   MAXTRC - number of traces on the reel ................  24
c
c   The following variables are established by the DCASS5
c   TAPEFIND command and are stored within the file header
c   record at the locations enumerated below.
c
c   SETFIL - setup    file name...........................  33
c   CALFIL - calb     file name...........................  39
c   GEOFIL - geometry file name...........................  45
c   RAWFIL - output   file name...........................  51
c   DATFIL - default output file name.....................  56
c   ISTFIL - starting key value...........................  65
c   SSHOT  - starting shot # on reel REELI to output.......  66
c   ESHOT  - ending   shot # on reel REELI to output.......  67
c   NSEQF  - number of sequential ensembles...............  68
c   NDATA  - number of non-zero data points...............  69
c   FSTREC - first record  # on reel REEL I to output......  70
c   IRECSZ - record size in longwords (32-bits) to output..  71
c   NDRIFH - number of records in output file header.......  72
c   NDRITH - number of records in output trace header......  73
c   NDRCPT - number of records in output trace data block..  74
c   NDRCPE - number of records in output ensemble..........  75
c   MAXREC - number of records in output file..............  76
c   NBIDF  - number of bytes   in output file..............  77
c   NTRO   - number of traces  in output file..............  78
```

The following variable is established by the setup data and set by DCASS5 command TAPETYPE. This variable has a DIMENSION of sixty-four (64) .

```
IFORD  - logical channel order on storage media.........  129
```

The below integer-valued variables and trace header location values are established by the FFTSIZE command. FORTRAN COMMON data block POINTR contains these variables. These variables are allocated within memory vector IPNTRS, which has a DIMENSION of one-hundred twenty-eight (128). This is accomplished indirectly through the use of an EQUIVALENCE statement. These variables are stored within the file header record as shown.

```
IPNTRS - variable memory pointers for trace header.....  257
NVCHAN - number of virtual memory channels.............  257
NDATAT - number of data points on tape.................  258
NDATA  - number of non-zero data points................  259
R      - where N = R**2 ...............................  260
N      - fft size .....................................  261
ND2P1  - number of raw spectral estimates..............  262
NT2    - N*2...........................................  263
ND2    - N/2...........................................  264
NM1    - N-1...........................................  265
NP1    - N+1...........................................  266
ND2M1  - N/2+1.........................................  267
NDSEG  - number of segments to use for stats...........  268
NFSEG  - number of segments to average.................  269
LFAVE  - NFAVE = LFAVE*2 + 1 ..........................  270
NFAVE  - number of freq Components to ave..............  271
NAVEF  - number of final spectral estimates............  272
IW     - window index..................................  273
NDOF   - number of degrees of freedom..................  274

VALUES OF VIRTUAL MEMORY POINTERS......................

IG11   = ( NVCHN - 2 )*( NDATAT + 2 ) + 1..............  275
IG22   = IG11 + NAVEF + 1..............................  276
IQ12   = IG22 + NAVEF + 1..............................  277
IC12   = IQ12 + NAVEF + 1..............................  278
IPI2   = IC12 + NAVEF + 1 .............................  279
IG12   = IQ12 + NAVEF + 1 .............................  280
IH12   = IG12 + NAVEF + 1 .............................  281
ICOHR  = IHI2 + NAVEF + 1..............................  282
```

```
c
c
c
c
c
c
c
c
c
c
c     DCASS5 TRACE HEADER POINTERS..........................
c
c     IFFID  -  field record number .......................... 283
c     IICHAN -  channel number ............................... 284
c     INSAMP -  number of points ............................. 285
c     IIRATE -  sample rate in usec .......................... 286
c     ILASTR -  last trace key:0 if not;1 if last ............ 287
c     IISEQN -  sequential number ............................ 288
c     IITYPE -  trace type key:0 if data;1 if aux ............ 289
c     IISHOT -  shot number .................................. 290
c     IYEAR  -  year  of demux ............................... 291
c     IMONTH -  month of demux ............................... 292
c     IDAY   -  day   of demux ............................... 293
```

```
c
c
c         INAM   - LABB/4 + 1 ......................................
c         ICALB  - INAM   + 1 ......................................
c         ICALCO - ICALB  + 1 ......................................
c         ISCALC - ICALCO + 4 ......................................
c         IGFX   - ISCALC + 1 ......................................
c         IGZERO - IGFX   + 1 ......................................
c         IISCRD - IGZERO + 1 ......................................
c         IICFLT - IISCRD + 1 ......................................
c         IINDEG - IICFLT + 1 ......................................
c         ICUNT  - IINDEG + 1 ......................................
c         IJSEQF - ICUNT  + 2 ......................................
c         IISKPC - IJSEQF + 1 ......................................
c         IIZTYP - IISKPC + 1 ......................................
c         IZPOS  - IIZTYP + 1 ......................................
c         IZDIR  - IZPOS  + 3 ......................................
c         IGLINE - IZDIR  + 3 ......................................
c         ISTAT  - 129 (Fixed location).............................
c         ISTATA - 8*NDSEG + ISTAT .................................
c         IABMIN - ISTATA  + 1 .....................................
c         IABMAX - IABMIN  + 1 .....................................
c         IIABMN - IABMAX  + 1 .....................................
c         IIABMX - IIABMN  + 1 .....................................
c         IPDFMX - IIABMX  + 1 .....................................
c         IPDFDX - IPDFMX  + 1 .....................................
c         IREMV  - IPDFDX  + 1 .....................................
c         IKCLAS - IREMV   + 1 .....................................
c         IPDF   - IKCLAS  + 1 .....................................
c         IGVAR  - KCLASS  + IPDF + 2 ..............................
c         IGVARA - NFSEG   + IGVAR .................................
c         IGMAX  - IGVARA  + 1 .....................................
c         IGMXHZ - IGMAX   + 1 .....................................
c         IMOM   - IGMXHZ  + 1 .....................................
c         IWAVE  - IMOM    + 4 .....................................
c         ICOVAR - IWAVE   + 8 .....................................
c         ICOVRA - ICOVAR + NDSEG ..................................
c         IG12VR - ICOVRA + 1 ......................................
c         IG12VA - IG12VR + NFSEG ..................................
c         IG12MX - IG12VA + 1 ......................................
c         IG12HZ - IG12MX + 1 ......................................
c         IP12MX - IG12HZ + 1 ......................................
c         IP12HZ - IP12MX + 1 ......................................
c         IH12MX - IP12HZ + 1 ......................................
c         IH12HZ - IH12MX + 1 ......................................
c         ICOHMX - IH12HZ + 1 ......................................
c         ICOHHZ - ICOHMX + 1 ......................................
c         IRTYPE - ICOHHZ + 1 ......................................
c         IRNLAG - IRTYPE + 1 ......................................
c         IR12MX - IRNLAG + 1 ......................................
c         IR12DT - IR12MX + 1 ......................................
c         IRTIMX - IR12DT + 1 ......................................
c         IRTIMN - IRTIMX + 1 ......................................
c         IRSTRT - IRTIMN + 1 ......................................
c         IREND  - IRSTRT + 1 ......................................
```

FLTDAT - floating point valued data stored in header... 385

W	- window parameter................................	385
U	- window mean square value........................	386
HM	- sample rate in seconds	387
TRECM	- segment length in seconds.......................	388
FFTDHZ	- fft freq resolution in Hertz....................	390
FFTDW	- fft freq resolution in rad/sec..................	391
DHZM	- ave freq resolution in Hertz....................	392
DWM	- ave freq resolution in rad/sec..................	393
FNYQM	- nyquist frequency in Hertz......................	394
RNYQM	- nyquist frequency in rad/sec....................	395
FLTN	- floating point value of variable N..............	396
SCLFFT	- scale factor to multiply FFT by.................	397
STDERR	- standard error of estimates.....................	398

The user must note that the variables stored within the DCASS5 file header record at locations 275 through 346 are actually locations for, or pointers to, variables contained within the trace header, DCASS5 trace headers are dynamically allocated by the program when the FFTSIZE command is executed. The locations at which variables are stored within the trace header are therefore established by either the FFTSIZE command or set when a DCASS5 data file is opened for input by the OPENSEQI command. By fixing the format of the DCASS5 data file header record and storing the dynamic trace header format within the file header record, data processing can be pursued without prior user specification of trace header format. The trace header format can be found in the echo listing of the FFTSIZE command and for this reason echoing of command cards should be enabled by command ECHO during the execution of the FFTSIZEcommand for documentation purpose.

Following the DCASS5 file header record, which contains the information previously described, each trace header and matching trace vector are stored sequentially. The DCASS5 trace header is 1024 bytes long and is therefore stored in one of the fixed length records. The trace is also stored in 1024 byte records as 32-bit floating point numbers. Each fixed length record may contain 256 data points. The number of data points per trace at the present time is limited to an integral power of two and therefore the number of tape records per data trace is also similarly restored Each DCASS5 data file should end with a EOF mark. Therefore the ENDFILE command must be used before closing a file with the CLOSE or EXIT commands when the DCASS5 data is initially generated by the OPENSEQO and DUMP commands.

User Generated Input and Control Files

Each DCASS5 computer run will use various files during its operation. Also DCASS5 can generate files. Only user generated files will be referenced in this section. User generated input files include the following.

a. System level job control language execution file

b. DCASS5 execution command file (OPENCOMD)

c. DCASS5 setup data file (SETUPDAT)

d. DCASS5 calibration data file (CALBDATA)

e. DCASS5 geometry data file (GEOMDATA)

f. DCASS5 analysis command file (OPENANAL)

These files and the commands which are normally found within these files will be described in the next sections. For detailed description of each data input and command file format the user is referred to Appendix A.

System Level Job Control Language Execution File

The system level job control language execution file is submitted by the user to initiate a DCASS5 computer run. This file is field record or SHOT dependent and contains all the host system job control language (JCL) card images needed to perform the desired procedure. This file contains card images whose purposes include commands which:

a. set the default user name directory

b. display the free space available in the user disk. (usefull if disk space usage problems arise).

c. mount any Fortran magnetic tape(s) needed for the DCASS5 computer run.

d. load the current DCASS5 executible image file.

e. present the first command card image to program DCASS5, which is typically the DCASS5 'OPENCOMD' command.

f. provides some or all of the command card images program DCASS5 requires for execution.

g. send and/or copy to magnetic tape any listing file generated by program DCASS5

h. copy to tape any Fortran binary data file generated by DCASS5.

i. provide a current directory listing of any Fortran magnetic tape mounted.

j. dismount and deallocate tape drives as needed.

k. optionally submit another DCASS5 batch job.

l. terminate the batch job.

Typical card images which might be found in this file are illustrated in example computer runs which are given in later sections.

DCASS5 Execution Command File

The DCASS5 execution command file is usually opened by the first DCASS5 command card image read by the program. This is the DCASS5 "OPENCOMD" command card image, stored in the system level JCL batch execution file. This file contains the DCASS5 command card images whose purposes include commands which:

a. open the DCASS5 command dcho listing file

b. set the default directory and output file name

c. open and load the setup, calibration and site geometry data files

d. open any Fortran input or output files needed for the process

e. open and execute the ANALYSIS data file or optionally provide all command cards needed to the desired process

f. close any open files as needed

g. return to system level JCL batch execution file.

The file names incorporated in the DCASS5 command card images are usually SHOT dependent, though the sequence and form of the command card images found in this file are not. After generation of a DCASS5 execution command file for a particular process and SHOT number, other SHOT numbers may be processed by an equivalent procedure by creating a new DCASS5 execution command file with different, though similar, input and output file names. If the file names used in this command file are similar in form to those found in the example computer runs to follow, the host-computer file editor may be used to easily generate a new command file.

```
c
c
c
c
c     DCASS5 command cards which are typically found in
c     the DCASS5 Execution Command File include:
c
c
c
c     OPENECHO - opens the command card echo list file
c
c     RUNTITLE - determines the 64 charecter RUN title
c
c     USERVERS - determines the default disk directory
c
c     SETUPDAT - loads data from the setup data file
c
c     CALBDATA - loads the calibration data file
c
c     GEOMDATA - loads the geometry data file
c
c     MOUNTGIN - loads the DISCO GOUT tape
c
c     TAPETYPE - determines the contents of the GOUT
c                tape
c
c     TAPEFIND - determines which SHOT is to be read
c
c     FFTSIZE  - determines the size  of the raw FFT
c                segment
c
c     OPENSEQO - opens the DCASS5 trace sequential
c                format file ( unformatted binary )
c
c     OPENLIST - opens  a DCASS5 listing file
c                (ASCII formatted)
c
c     ANALYSIS - opens and executes the ANALYSIS file
c
c     ENDFILE  - generate and end of file mark (EOF)
c                to a specified Fortran unit number
c
c     CLOSE    - close a specified FORTRAN unit number
c
c     SUMMARY  - generate  a listing which contains a
c                summary of the DCASS5 command cards
c                which have been executed
c
c     EXIT     - exit to system level and close any
c                open files
c
c     STOP     - stop program ( EXIT perferred )
c
c
```

DCASS5 Analysis Command File

Analysis command card images may be loaded by the 'ANALYSIS' command. Any valid DCASS5 command card image may be stored in the analysis command file. Analysis command card images are read and then stored directly in main memory. By having the analysis command card sequence or command 'thread' stored directly in memory, conditional branching, jumping and looping on the command cards is made possible. This feature eliminates the requirement that the program rewind or backspace within the analysis command file or skip command cards. DCASS5 Version 1.0A can store a maximum of sixty-four command card images at one time. This limitation can be changed if desired. Typically command cards stored within the analysis command file are not field record or SHOT dependent. The typical command card sequence provides the necessary commands needed to perform a standard digital signal processing analytical procedure. Three such procedures will be described in detail in later sections.

Standard functions that can be performed by an 'ANALYSIS' file command thread include the following 'passes' on the data.

1.) Standard DCASS5 Pass One:

a. calibrate digitial GOUT tapes to engineering units and plot time histories of transducers.

b. Plot spectral density functions for each transducer.

c. Compute and list time domain statistics for each trace.

d. Generate DCASS5 'RAW' data and 'FFT' Fortran files (DCASS5 FFT file becomes input for Pass Two) .

2.) Standard DCASS5 Pass Two:

a. Convert trace raw FFT complex array from units of acceleration or velocity to displacement.

b. Compute and plot auto and cross-spectral density functions.

c. Compute and plot transfer function magnitude and phase.

d. Compute and plot coherence function.

3.) Standard DCASS5 Pass Three:

a. Same as (a.) in Pass Two.

b. Compute and plot one of six generalized cross-correlation functions.

Figures 1 and 2 show illustrate pass one and pass two.

DCASS5 commands which are typically found in the 'ANALYSIS' command file include the following analysis control card images:

LISTANAL - Generate listing of ANALYSIS cards.

LOOP - Loop on command cards untill ENDLOOPp.

ENDLOOP - End of LOOP on command cards.

IF - Conditional branching within ANALYSIS command file.

GO TO - Unconditional branching within ANALYSIS command cards.

GOSUB - Execute a command card subroutine

ECHO ON - Enable command card echo listing.

ECHO OFF - Disable command card echo listing.

RETURN - Terminates call to command cored subroutine

SUMMARY - List summary of command executions and wall clock time percentages.

ENDANALY - Returns control to execution command file or default input device.

COMMENT - Comment line (no action taken)

```
c
c     The following DCASS5 command cards actually
c     perform the desired digitial signal processing
c     functions.
c
c     CALIBRAT - Calibrate raw A/D counts to
c                engineering units for a trace vector.
c
c     DATASTAT - Perform statistical calculations on
c                a trace vector.
c
c     COVARIAN - Compute covariance for two trace vectors.
c
c     PLOTCHAN - Produce a "CALCOMP" plot file of a
c                trace vector.
c
c     WINDOW   - Multiply calibrated trace vector by
c                time domain window (used prior to
c                REALFFT command to reduce leakage).
c
c
c
c     REALFFT  - Perform Forward Fast Fourier Trans-
c                form for a real-valued trace vector
c                in time domain.
c
c     REALIFFT - Perform Inverse Fast Fourier Trans-
c                form for a complex-valued trace vector
c                in the frequency domain.
c
c     SPECTRA  - Compute spectral density function.
c
c     PLOTSPEC - Plot spectral density function.
c
c     CROSSPEC - Compute cross-spectral density func-
c                tion for two trace vectors.
c
c     MOTION   - Convert raw FFT with units of accel-
c                eration or velocity to displacement.
c
c     LISTVECT - List values of trace vector.
c
c     LISTSTAT - List statistics of trace.
c
c     TRANSFER - Compute SISO transfer magnitude and
c                phase.
c
c     PLOTRANS - Plot transfer function, auto and
c                cross-spectral functions, and coher-
c                ence.
c
c     SADDVECT - Scaled addition of two vectors.
c
c     MOVEVECT - Transfer one vector to another.
c
```

```
c       MUTEVECT - Equate portion of a vector to zero.
c
c       CHANSKIP - Skip a GOUT format trace on tape.
c
c       FFIDSKIP - Skip a SHOT on GOUT tape.
c
c       SKIPCHAN - Skip a DCASS5 format trace.
c
c       SKIPHEAD - Skip a DCASS5 file header.
c
c       STORGEO  - Store geometry data in trace header.
c
c       PLOTSMAX - Set maximum number of CALCOMP plots
c                  per file.
c
c       DESKEW   - Remove multiplexer time deskew.
c
c       CROSSCOR - Compute cross-correlation function.
c
c       SAVEFILT - Compute and save filter weights.
c
c       LISTPDF  - List probability density functions.
c
c       LISTRANS - List transfer function magnitude and
c                  phase, auto and cross-spectral dens-
c                  ities and coherence functions for two
c                  trace vectors.
c
c       FILTER   - Filter a trace vector.
c
c
c
```

```
c
c
c
c
c      XXXXXXXXX  XXXXXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXX
c      X       X  X             X X          X X           X X          X
c      X SETUP X  X CALIBRATION X X GEOMETRY X X EXECUTION X X ANALYSIS X
c      X  DATA X  X    DATA     X X   DATA   X X  COMMAND  X X  COMMAND X
c      X  FILE X  X    FILE     X X   FILE   X X   FILE    X X   FILE   X
c      X       X  X             X X          X X           X X          X
c      XXXXXXXXX  XXXXXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXX
c              \        I              I             I              I
c               \       I              I             I              I
c      XXXXXXXXX \     \I/            \I/           \I/            \I/
c      X       X  \    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c      X  GOUT X   \---> X                                             X
c      X  DATA X         X              PROGRAM DCASS5                 X
c      X  TAPE X-------> X                                             X
c      X       X         X                                             X
c      XXXXXXXXX         XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c                          I  I   I             I              I
c      XXXXXXXXXX          I  I   I             I              I
c      X        X         /   I   I             I              I
c      X DCASS5 X <------/    I   I             I              I
c      X   RAW  X             I   I             I              I
c      X  DATA  X             I   I             I              I
c      X  FILE  X             I   I             I              I
c      X        X             I   I             I              I
c      XXXXXXXXXX            /    I             I              I
c                           /    \I/           \I/             I
c      XXXXXXXXXX          /  XXXXXXXXXXXX XXXXXXXXXXXXX       I
c      X        X         /   X          X X           X       I
c      X DCASS5 X        /    X  COMMAND X X   TRACE   X       I
c      X   FFT  X <-----/     X   ECHO   X X STATISTICS X      I
c      X   DATA X             X  LISTING X X  LISTING  X       I
c      X   FILE X             X   FILE   X X   FILE    X       I
c      X        X             X          X X           X       I
c      XXXXXXXXXX             XXXXXXXXXXXX XXXXXXXXXXXXX       I
c                                                              I
c                                                              I
c                                                             \I/
c                  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c                  X                                               X
c                  X  CALCOMP PLOT OF SPECTRAL DENSITY FUNCTIONS    X
c                  X   AND TIME DOMAIN SECTION OF TRACES            X
c                  X                                               X
c                  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c
c
c
c                        Figure 1
c
c                  STANDARD DCASS5 PASS ONE
c
c
```

```
c
c
c  XXXXXXXXX  XXXXXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXX
c  X       X  X             X X          X X           X X          X
c  X SETUP X  X CALIBRATION X X GEOMETRY X X EXECUTION X X ANALYSIS X
c  X  DATA X  X    DATA     X X   DATA   X X  COMMAND  X X  COMMAND X
c  X  FILE X  X    FILE     X X   FILE   X X   FILE    X X   FILE   X
c  X       X  X             X X          X X           X X          X
c  XXXXXXXXX  XXXXXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXX
c          \         I            I             I             I
c           \        I            I             I             I
c  XXXXXXXXXX \     \I/          \I/           \I/           \I/
c  X        X  \  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c  X DCASS5 X   \---> X                                              X
c  X  FFT   X         X               PROGRAM DCASS5                 X
c  X  FILE  X-------> X                                              X
c  X        X         X                                              X
c  XXXXXXXXXX         XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                              I                 I              I
c                             \I/               \I/             I
c                         XXXXXXXXXXXX XXXXXXXXXXXXXX           I
c                         X          X X            X           I
c                         X  COMMAND X X  TRANSFER  X           I
c                         X   ECHO   X X  FUNCTION  X           I
c                         X  LISTING X X  LISTING   X           I
c                         X   FILE   X X   FILE     X           I
c                         X          X X            X           I
c                         XXXXXXXXXXXX XXXXXXXXXXXXXX           I
c                                                               I
c                                                               I
c                                                               I
c                                                              \I/
c   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c   X                                                                  X
c   X  CALCOMP PLOT OF AUTO AND CROSS SPECTRAL DENSITY FUNCTIONS       X
c   X  TRANSFER FUNCTION PHASE AND MAGNITUDE, AND COHERENCE            X
c   X                                                                  X
c   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
c
c
c
c
c
c                            Figure 2
c
c                    STANDARD DCASS5 PASS TWO
c
c
```

DCASS5 Setup Data File

The setup data file is loaded by the 'SETUPDAT' command and usually is executed directly after the 'USERVERS' command. Input data found within the setup data file include:

a. TITLE - title information (48 characters)

b. CALB - calibration file code

c. USER - user name (20 charecters)

d. SCHNAM - trace names given in sequential logical channel order for channels 1 to 64

e. COMENT - comment line (80 charecters)

If the calibration code has been set non-blank then DCASS5 will attempt to load the calibration data file with this file code. If the calibration code is blank then no calibration data will be loaded by the 'SETUPDAT' command. The number of trace names given and their order determine the number of traces and the logical channel order. Also the number of trace names found in the setup data file determines the number of channels for which calibration and geometery data must be loaded by the user.

The input format for the variables found in the setup data file are given below:

CARD	FIELD	VARIABLE	FORMAT
1	1- 4	CALB	A4
1	5- 8	CMD	A4
1	9-12	SET	A4
1	13-60	TITLE	12A4
1	61-80	USER	5A4
2	1-80	COMMENT	20A4
3	1-80	(SCHNAM(I),I=1,16)	16(A4,1X)
4	1-80	(SCHNAM(I),I=17,32)	16(A4,1X)
5	1-80	(SCHNAM(I),I=33,48)	16(A4,1X)
6	1-80	(SCHNAM(I),I=49,64)	16(A4,1X)

DCASS5 Calibration Data File

The calibration data file is loaded by the "CALBDATA" command. This user-generated data file provides the neccessary information to convert the host analog-to-digitial converter's binary numeric representation to voltage and then convert this voltage to the engineering units of the specfic transducer or trace.

The folowing information is given on one card image for each trace:

```
a. TMP6             - trace name (TMP6 is matched with SCHNAM
                      and the logical number ICHAN determined)
b. CHNUNT(ICHAN)    - trace engineering units ( 8 character )
c. ISCORD(ICHAN)    - logical channel number
d. ICFILT(ICHAN)    - index number key for filter selection
e. NDEG(ICHAN)      - expansion integer location
f. CALCO(1,ICHAN)   - multiplexer time deskew
g. CALCO(2,ICHAN)   - nominal analog-to-digitial (A/D)
                      trace weight factor ( nominal voltage
                      per A/D bit )
h. CALCO(3,ICHAN)   - fractional difference from the nomial
                      weight factor
i. CALCO(4,ICHAN)   - trace zero offset
j. SCAL(ICHAN)      - voltage to engineering units conversion
                      factor
```

Note more card images than needed may be stored in the calibration file. When the calibration data is loaded, the program logic only permits calibration card images to be stored in memory if the trace name appears in the setup data file and the logical channel number correspondes to that implied by the order in which the trace names are stored in the setup data file.

The format for the variables found in the calibration file are as follows

FIELD	VARIABLE	FORMAT
1- 8	TMP6	A4,4X
9-16	CHNUNT(ICHAN)	2A4
17-19	ISCORD(ICHAN)	I3
20-23	ICFILT(ICHAN)	I4
24-25	NDEG(ICHAN)	I2
26-37	CALCO(1,ICHAN)	0PE12.5
38-48	CALCO(2,ICHAN)	0PE11.5
49-59	CALCO(3,ICHAN)	0PE11.5
60-69	CALCO(4,ICHAN)	0PE10.4
70-80	SCAL(ICHAN)	0PE11.5

Site Geometry Data File

The site geometry data file provides DCASS5 with three-dimension spatial locations and orientations for each transducer or trace selected by the setup data file. General information provided by the first two cards found in the file consists of

a. GUNITS - type of units used for transducer postions (METERS OR FEET)

b. IGEOSCL - spatial coordinate scale factor

c. GLBORG - global coordinate postion

d. SITE - site location (32 characters)

The card images found after the first two contain information for each trace as given below.

a. TMP7 - trace name

b. IZTYP - type of units as defined below

'IZYP'	TYPE OF MEASUREMENT
0	VOLTAGE
1	LINEAR DISPLACEMENT
2	LINEAR VELOCITY
3	LINEAR ACCELERATION
4	ANGULAR ROTATION
5	ANGULAR VELOCITY
6	ANGULAR ACCELERATION
7	FORCES
8	BENDING MOMENTS
9	STRAIN
10	PRESSURE
11	TEMPERATURE
12-32	EXPANSION SPACE

c. ZPOS - 3-dimensional transducer position vector

d. ZDIR - 3-dimensional transducer direction cosine vector

e. GLINES - 3 physical line names (8 characters each) which the transducer location coincides with.

The input format for the site geometry data file is given below

CARD	FIELD	VARIABLE	FORMAT
1	1- 8	GFOUND	2A4
1	9-16	GUNITS	2A4
1	17-24	IGEOSCL	I8
1	25-48	GLBORG	3F8.3
1	49-80	SITE	8A4
2-N	1- 4	TMP7	A4
2-N	5- 8	IZTYP(ICHAN)	I4
2-N	9-32	(ZPOS(ICHAN,I),I=1,3)	3F8.3
2-N	33-56	(ZDIR(ICHAN,J),J=1,3)	3F8.5
2-N	57-80	((GLINES(K,I,ICHAN), K=1,2),I=1,3)	6A4

Job Control, Input Data, Command and Output Data File Specification

To facilitate efficient and consistant use of program DCASS5, a specific subdirectory and file name specification convention has been established. Other file name conventions may be established by the user but the conventions listed below are adequate for most uses of program DCASS5 and have used in the example computer run given within this document.

User Generated Input File Name Specifications	Description
[CIVMWO]$$$$$$$$.COM	System Level
[.DCASS]$$$$$$$$.CMD	DCASS5 Execution Command File
[.DCASS]$$$$$$$$.ANL	DCASS5 Analyses Command File
[.DCASS]SETUPDAT.$$$	DCASS5 Setup Data File
[.DCASS]CALB$$$$.DAT	DCASS5 Calibration Data File
[.DCASS]GEOM$$$$.DAT	DCASS5 Geometry Data File

The $ characters in the above file specifications are determined by the user. The [.DCASS] subdirectory may be replaced by any other five-(5) character subdirectory name or the six-(6) character main directory name for which on the U.H. systems used by the author is [CIVMWO]. The main directory name is given to the user by the system's manager of the computer facility and would be different for each user.

Each output file created by program DCASS5 may use any file desired by the user. A file name specification convention has been established to aid the user. Each type of output file has a given file extent as given below

- .RAW - Raw Data File
- .FFT - FFT Data File
- .HSR - CALCOMP Plot File
- .TRN - Transfer Function Listing File
- .STA - Statistics Listing File
- .PDF - PDF Listing File
- .ECO - Command Echo Listing File

```
C
C
C                         APPENDIX A
C
C
C DCASS5  -  VAX VERSION 1.0 A                                  'ANALYSIS'-1
C
C                         'ANALYSIS' COMMAND
C
C PURPOSE - TO OPEN A FILE CONTAINING DCASS COMMANDS AND THEN LOAD
C           THE COMMANDS INTO MEMORY AND THEN EXECUTING THE
C           CARD IMAGES BY DIRECTING SUBROUTINE GETCMD TO MEMORY.
C
C
C       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
C       ----------------------------------------------------------
C
C       1-8     1X,I4,3X        ILINE           NONE
C       9-16    A8              TYPE           ='ANALYSIS'
C       17-24   8X              NONE
C       25-48   6A4             ANLFIL
C       49-56   8X              NONE
C       57-64   I8              LUNANL
C       65-72   I8              IAVSAV          0
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS CARD IMAGE LINE NUMBER.
C       TYPE    -       COMMAND NAME
C       ANLFIL  -       NAME OF FILE
C       LUNANL  -       LOGICAL UNIT NUMBER TO ATTACH TO FILE
C       IAVSAV  -       IF SET GREATER THAN 1, COMMAND WILL WRITE
C                       FILE TO DISK. (USEFUL IF RUNNING INTERACTIVE)
C
C
C
C
C
```

```
c DCASS5  -  VAX VERSION 1.0A                              'CALBDATA-1'
c
c                          'CALBDATA' COMMAND
c
c PURPOSE - TO OPEN AND READ IN CALIBRATION FILE DATA FOR DATA SET
c
c
c       FIELD   FORMAT           VARIABLE       DEFAULT VALUE
c       ---------------------------------------------------------
c
c       1-8     1X,I4,3X         ILINE          NONE
c       9-16    A8               TYPE           ='CALBDATA'
c       17-32   16X              NONE           NONE
c       33-40   2A4              CALNAM         NONE
c       41-56   16X              NONE           NONE
c       57-64   I8               LUNCAL         1
c       65-72   I8               LUNLST         LUNLOG
c       73-80   8X               NONE           NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS COMMAND LINE NUMBER
c       TYPE    -       COMMAND NAME
c       CALBNAM -       8 CHARACTER NAME OF CALIBRATION FILE
c                       (FIRST 4 CHARECTERS MUST BE 'CALB' )
c       LUNCAL  -       LOGICAL UNIT NUMBER FOR CALIBRATION FILE INPUT
c       LUNLST  -       LOGICAL UNIT TO SEND CALIBRATION DATA ECHO
c
c
```

```
c DCASS -    VAX VERSION 1.0A
c
c                         'CALIBRAT' COMMAND
c
c PURPOSE- TO CONVERT RW DATA STORED IN A SPECIFIED MEMORY VECTOR
c          TO ENGINEERING UNITS USING THE CONVERSION DATA LOADED
c          BY DCASS5 COMMAND 'CALBDATA'
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ------------------------------------------------------------
c       1-8     1X,I4,3X        ILINE           0
c       9-16    A8              TYPE            ='CALIBRAT'
c       17-24   A8              CMORE           NONE
c       25-32   8X              NONE            NONE
c       33-40   I8              IZS             NONE
c       41-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       CMORE   -       THIS VARIABLE IS NOT USED
c       IZS     -       MEMORY VECTOR NUMBER TO CALIBRATE
c
c
c
```

```
c DCASS -    VAX VERSION 1.0A                               'CHANSKIP' COMMAND
c
c                                 'CHANSKIP' COMMAND
c
c
c          PURPOSE - TO SKIP A GOUT FORMAT TRACE IN SHOT ON TAPE MOUNTED BY
c                    MOUNTED  TAPETYPE, AND TAPEFIND COMMAND
c
c          FIELD         FORMAT           VARIABLE
c          --------------------------------------------------------
c           1- 8         1X,I4,3X         ILINE
c           9-16         A8               TYPE
c          17-24         8X               NONE
c          25-32         I8               NRCSKP
c
c
c
c
c          VARIABLE DESCRIPTION
c          --------------------
c
c          NRCSKP  - TRACE TO SKIP ON FORMAT TO REVERSE DIRECTION
c                    (COMMAND CAN SKIP PAST SHOT BOUNDARIES)
c
```

```
c DCASS -   VAX VERSION 1.0A                                   'CLOSE   ' COMMAND
c
c
c                        'CLOSE   ' COMMAND
c
c PURPOSE- TO CLOSE  A RAW DATA TAPE OR DCASS INPUT OR OUTPUT FILE.
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ------------------------------------------------------------
c       1-8     1X,I4,3X        ILINE           0
c       9-16    A8              TYPE            ='CLOSE   '
c       17-24   8X              NONE            NONE
c       25-32   A8              CREEL           NONE
c       33-40   8X              NONE            NONE
c       41-48   I8              LUNCLS          NONE
c       49-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       CREEL   -       SPECIFES WHAT FILE OR TAPE TO CLOSE
c                       MUST BE ONE OF THE FOLLOWING:
c                       'REELI   ' - ACTUAL NAME OF REEL
c                                    FROM 'MOUNTGIN' COMMAND
c                       'SEQINPUT' - DCASS INPUT FILE
c                                    (ONLY 1 INPUT FILE CAN
c                                     BE OPEN AT ONE TIME)
c                       'SEQOUT  ' - DCASS OUTPUT FILE
c       LUNCLS  -       LOGICAL UNIT NUMBER OF FILE TO CLOSE
c                       (NOT NEEDED IF 'REELI' USED )
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A
c
c                         'COVARIAN' COMMAND
c
c PURPOSE- TO COMPUTE THE COVARIANCE OF TWO SPECIFIED TRACE VECTORS
c          STORED IN MAIN MEMORY .
c
c
c      FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c      ------------------------------------------------------------------
c      1-8     1X,I4,3X         ILINE            0
c      9-16    A8               TYPE             ='COVARIAN'
c      17-24   8X               NONE             NONE
c      25-32   8X               NONE             NONE
c      33-40   I8               IZS1             NONE
c      41-48   8X               NONE             NONE
c      49-56   I8               IZS2             NONE
c      57-80   NONE             NONE             NONE
c
c      VARIABLE DESCRIPTION
c      --------------------
c
c      ILINE    -       DCASS5 COMMAND LINE NUMBERS
c      TYPE     -       COMMAND NAME
c      IZS1     -       MEMORY TRACE VECTOR 1 TO OPERATE ON
c      IZS2     -       MEMORY TRACE VECTOR 2 TO OPERATE ON
c                       (RESULTS ARE STORED IN THE VECTOR 2
c                        TRACE HEADER)
c
c
c
c
```

```
c DCASS -    VAX VERSION 1.0A                                'CROSSPEC' COMMAND
c
c                            'CROSSPEC' COMMAND
c
c PURPOSE- TO COMPUTE THE CROSSPECTRA OF TWO SPECIFIED TRACE VECTORS
c          STORED IN MAIN MEMORY .
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ----------------------------------------------------------
c       1-8     1X,I4,3X        ILINE           0
c       9-16    A8              TYPE            ='CROSSPEC'
c       17-24   8X              NONE            NONE
c       25-32   8X              NONE            NONE
c       33-40   I8              IZS1            NONE
c       41-48   8X              NONE            NONE
c       49-56   I8              IZS2            NONE
c       57-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       IZS1    -       MEMORY TRACE VECTOR 1 TO OPERATE ON
c       IZS2    -       MEMORY TRACE VECTOR 2 TO OPERATE ON
c                       (RESULTS ARE STORED AS DETERMINED BY
c                        COMMAND 'FFTSIZE ')
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A
c
c
c                         'CROSSCOR' COMMAND
c
c PURPOSE- TO COMPUTE ONE OF SIX GENERALIZED CROSS-
c          CORRELATION FUNCTIONS.
c
c
c       FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c       ----------------------------------------------------------------
c       1-8     1X,I4,3X         ILINE            0
c       9-16    A8               TYPE             ='CROSSCOR'
c       17-24   8X               NONE             NONE
c       25-32   A8               R12TYP           NONE
c       33-40   8X               NONE             NONE
c       41-48   I8               NLAGS            NONE
c       49-80   NONE             NONE             NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       R12TYP  -       DETERMINES WHICH TYPE OFSIX GENERALIZED
c                       CROSS-CORRELATION FUNCTIONS TO COMPUTE.
c                       'NORMAL','    PHAT',    SCOT',
c                       ' IMPULSE','  H-T(I)',' ECKARDT'
c
c       NLAGS   -       NUMBER OF POINTS TO LAG CROSS-CORELATION
c
c
c
c
```

```
C DCASS -   VAX VERSION 1.0A                                  'DATASTAT' COMMAND
C
C                         'DATASTAT' COMMAND
C
C PURPOSE- TO COMPUTE TIME DOMAIN STATISTICAL INFORMATION OF A
C          SPECIFIED MEMORY VECTOR AND STORE THE RESULTS IN THE
C          TRACE HEADER FOR THE TRACE MEMORY VECTOR.
C
C
C       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
C       ----------------------------------------------------------
C       1-8     1X,I4,3X        ILINE           0
C       9-16    A8              TYPE            ='DATASTAT'
C       17-24   A8              CHORE           NONE
C       25-32   8X              NONE            NONE
C       33-40   I8              IZS             NONE
C       41-48   8X              NONE            NONE
C       49-56   I8              IREMV           0
C       57-80   24X             NONE            NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASSS COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C       CHORE   -       THIS VARIABLE IS NOT USED
C       IZS     -       MEMORY VECTOR NUMBER TO OPERATE ON
C       IREMV   -       THIS LOGICAL SWITCH DETERMINES IF MEAN
C                       VALUE AND/OR MEAN SLOPE WILL BE REMOVED
C                       DURING THIS OPERATION.
C                       0       -       NO DATA MODIFICATION
C                       1       -       MEAN VALUE REMOVED
C                       2       -       MEAN AND SLOPE REMOVED
C
C
C
```

```
C DCASS -   VAX VERSION 1.0A                                 'DESKEW  ' COMMAND
C
C                         'DESKEW  ' COMMAND
C
C PURPOSE- TO  REMOVE THE TIME DESKEW OF THE MULTIPLEXER AS
C           SPECIFIED IN THE CALIBRATION FILE LOADED
C           BY DCASS5 COMMAND 'CALBDATA' OR 'SETUPDAT'
C
C
C       FIELD   FORMAT           VARIABLE         DEFAULT VALUE
C       ---------------------------------------------------------------
C       1-8     1X,I4,3X         ILINE            0
C       9-16    A8               TYPE             ='DESKEW  '
C       17-24   A8               CMORE            NONE
C       25-32   8X               NONE             NONE
C       33-40   I8               IZS              NONE
C       41-80   NONE             NONE             NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE    -       DCASS5 COMMAND LINE NUMBERS
C       TYPE     -       COMMAND NAME
C       CMORE    -       THIS VARIABLE IS NOT USED
C       IZS      -       MEMORY VECTOR NUMBER TO DESKEW
C
C
C
```

```
C DCASS -   VAX VERSION 1.0A                                    'DUMPCHAN' COMMAND
C
C                         'DUMPCHAN' COMMAND
C
C PURPOSE- TO WRITE SPECIFIED MEMORY VECTOR AND TRACE HEADER TO
C          A SPECIFIED LOGICAL UNIT NUMBER IN DCASS FORMAT.
C
C
C       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
C       ------------------------------------------------------------
C       1-8     1X,I4,3X        ILINE           0
C       9-16    A8              TYPE            ='DUMPCHAN'
C       17-32   26X             NONE            NONE
C       33-40   I8              IZS             NONE
C       41-48   8X              NONE            NONE
C       49-80   24X             NONE            NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C       IZS     -       DCASS MEMORY VECTOR NUMBER
C       LUNSQQ  -       LOGICAL UNIT NUMBER TO OUTPUT DATA TO
C
C
C
```

```
c DCASS -   VAX VERSION 1.0A                                 'ECHO OFF ' COMMAND
c
c                          'ECHO OFF ' COMMAND
c
c PURPOSE- TO END THE ECHOING OF COMMAND CARDS AND COMPLETION TIMES
c          TO THE LOGICAL UNIT NUMBER SPECIFIED IN THE 'OPENECHO' COMMAND.
c
c
c      FIELD   FORMAT            VARIABLE         DEFAULT VALUE
c      --------------------------------------------------------------
c      1-8     1X,I4,3X          ILINE            0
c      9-16    A8                TYPE             ='ECHO OFF '
c      17-80   NONE              NONE             NONE
c
c      VARIABLE DESCRIPTION
c      --------------------
c
c      ILINE   -      DCASS5 COMMAND LINE NUMBERS
c      TYPE    -      COMMAND NAME
c
c
c
c
c
c
c
c
c
c
```

```
C DCASS -    VAX VERSION 1.0A                                  'ECHO ON  ' COMMAND
C
C                              'ECHO ON  ' COMMAND
C
C PURPOSE-- TO START THE ECHOING OF COMMAND CARDS AND COMPLETION TIMES
C           TO THE LOGICAL UNIT NUMBER SPECIFIED IN THE 'OPENECHO' COMMAND.
C
C
C       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
C       ----------------------------------------------------------
C       1-8     1X,I4,3X         ILINE           0
C       9-16    A8               TYPE            ='ECHO ON  '
C       17-80   NONE             NONE            NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C
C
C
C
C
C
C
C
C
```

```
c
c
c                        'ELSEIF' COMMAND
c
c
c     PURPOSE - TO CONDITIONALLY TRANSFER COMMON TO A NEW DCASS5 ANALYSIS
c               CARD IMAGE ( ADDS MULTIPLE CONDITIONS TO 'IF' )
c
c
c     FIELD          FORMAT             VARIABLE
c     -------------------------------------------------------------
c      1- 8          1X,I4,3X           ILINE
c      9-16          A8                 TYPE
c     17-24          A8                 CIFKEY
c     25-32          8X                 CIFNAM
c     33-40          A8                 CIFLOOP
c     41-48          I8                 IFVAL
c     49-56          A8                 CIFGO
c     57-64          I8                 CIFJMP
c
c
c     VARIABLE DESCRIPTION
c     --------------------
c
c     CIFKEY     - PARAMETER ON WHICH TO KEY IF STATEMENT
c                  POSSIBLE VALUES;
c                  'CHANNEL  ' - LOGICAL CHANNEL NUMBER
c                  'SHOT     ' - SHOT NUMBER
c                  'SEQCHAN  ' - SEQUENTIAL CHANNEL NUMBER
c                  'SEQFILE  ' - SEQUENTIAL FILE NUMBER
c                  'FFID     ' - FIELD RECORD NUMBER
c                  'LASTR    ' - LAST TRACE IN FILE
c                  'LOOP ON  ' - NAME OF FILE (CLOOP IS MATCHED)
c     CIFNAM     - LOOP TO KEY ON
c                  ONLY USED IF CIFKEY EQUALS 'LOOP ON'
c     CIFLOOP    - CONDITION TO TEST POSSIBLE VALUES
c                  POSSIBLE VALUES
c                  'EQUAL      ' , 'NOTEQUAL    '
c                  'LESSTHAN   ' , 'MORETHAN    '
c                  'LESSOREQ   ' , 'MOREOREQ    '
c     IFVAL      - CONDITIONAL VALUE TO TEST
c     CIFGO      - CONTROL TRANSFER IF CONDITION IS TRUE
c                  POSSIBLE BALUES
c                  'GO TO' - OF TRUE JUMP TO LINE CIFJUMP
c                  'THEN ' - IF TRUE TRANSFER TO NEXT STATEMENT
c                            IF NOT TRANSFER TO END_IF STATEMENT
c                  'AND  ' - PERMITS CONDITIONAL TRANSFER OF BOTH OF TWO
c                            CONDITIONS ARE TRUE
c                  'OR   ' - PERMIT IF EITHER OF TWO CONDITIONS ARE TRUE
c     CIFJMP     - DCASS5 LINE NUMBER TO JUMP TO IF STATEMENT IS TRUE
c                  (USED IF CIFGO = 'GO TO')
```

```
c DCASS -   VAX VERSION 1.0A                                        'ENDFILE ' COMMAND
c
c                         'ENDFILE ' COMMAND
c
c PURPOSE- TO WRITE AN END-OF-FILE MARK TO A SPECIFIED OUTPUT FILE.
c
c
c       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
c       --------------------------------------------------------------
c       1-8     1X,I4,3X         ILINE           0
c       9-16    A8               TYPE            ='ENDFILE '
c       17-24   8X               NONE            NONE
c       25-32   A8               EFREEL          NONE
c       33-40   8X               INONE           NONE
c       41-48   I8               LUNEOF          NONE
c       49-80   30X              NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       EFREEL  -       MUST EQUAL 'SEQOUT  ' TO WRITE EOF
c       LUNEOF  -       LOGICAL UNIT NUMBER TO WRITE EOF
c
c
c
```

DCASS5 - VERSION 1.0 A

'ENDANALY' COMMAND

PURPOSE - TO SIGNIFY THE END OF AN ANALYSIS FILE. PROGRAM CONTROL IS RETURNED TO FILE OR DEVICE PREVIOUSLY USED.

FIELD	FORMAT	VARIABLE	DEFAULT VALUE
1- 8	1X,I4,3X	ILINE	0
9-16	A8	TYPE	'ENDANALY'
17-80	16A4	RUNTITL	64 BLANKS

VARIABLE DESCRIPTION

ILINE - DCASS5 COMMAND LINE NUMBER
TYPE - COMMAND NAME
RUNTITL - 64 CHARACTER RUN TITLE

```
c     DCASS5 - VERSION 1.0 A                                    'END IF ' COMMAND
c
c
c
c                                  'END IF' COMMAND
c
c        PURPOSE - TO SIGNIFY THE END ON A SECTION OF DCASS5 COMMAND AND
c                  IMAGER WHICH MAY BE CONDITIONALLY EXECUTED AFTER IF
c                  COMMAND CONDITION IS FOUND TRUE (USED IF CIFGO = '  THEN '
c                  IN IF COMMAND)
c
c
c
c        FIELD         FORMAT         VARIABLE      DEFAULT VALUE
c        ---------------------------------------------------------
c         1- 8         1X,I4,3X        ILINE         0
c         9-16         A8              TYPE          'END IF  '
c        17-80         NONE            NONE
c
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    - DCASS5 COMMAND LINE NUMBER
c        TYPE     - COMMAND NAME
```

```
C
C DCASS5  - VAX VERSION 1.0 A                                   'ENDLOOP' COMMAND
C
C
C
C                        'ENDLOOP' COMMAND
C
C
C
C PURPOSE- TO SIGNIFY THE END OF A COMMAND CARD IMAGE ECECUTION LOOP
C          ( SEE LOOP COMMAND )
C
C
C       FIELD            FORMAT           VARIABLE         DEFAULT
C       -------------------------------------------------------------
C
C        1- 8            1X,I4.3X         ILINE            0
C        9-16            A8               TYPE
C       17-24            8X               NONE
C       25-32            A8               ECLOOP
C
C
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -        DCASS5 COMMAND LINE NUMBER
C       TYPE    -        COMMAND NAME
C       ECLOOP  -        NAME OF LOOP TO TERMINATE( NOT NEEDED )
C
C
C
```

```
c DCASS -   VAX VERSION 1.0A                                   'EXIT     ' COMMAND
c
c                         'EXIT     ' COMMAND
c
c PURPOSE- TO STOP EXECUTION OF PROGRAM DCASS5 USING THE EXIT SUBROUTINE
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ----------------------------------------------------------
c       1-8     1X,I4,3X        ILINE           0
c       9-16    A8              TYPE            ='EXIT     '
c       17-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A
c
c                                'FFIDSKIP' COMMAND
c
c
c         PURPOSE - TO SKIP A GOUT FORMAT FFID  ON TAPE MOUNTED BY
c                   MOUNTED  TAPETYPE, AND TAPEFIND COMMAND
c
c         FIELD        FORMAT           VARIABLE
c         ---------------------------------------------------------
c          1- 8        1X,I4,3X         ILINE
c          9-16        A8               TYPE
c         17-24        8X               NONE
c         25-32        I8               NENSKP
c
c
c
c
c         VARIABLE DESCRIPTION
c         --------------------
c
c         NENSKP  - NUMBER OF FFID'S TO SKIP (SKIPS THAT NUMBER
c                   OF TRACES FROM CURRENT POSTION ON TAPE )
c                   (COMMAND CAN SKIP INTO SHOT BOUNDARIES)
c
```

```
c DCASS -   VAX VERSION 1.0A                                 'FFTSIZE ' COMMAND
c
c                          'FFTSIZE ' COMMAND
c
c PURPOSE- TO SET THE SEGMENT SIZE FOR FAST FOURIER TRANSFORM (FFT)
c          OPERATIONS, NUMBER OF SUB-SEGMENTS PER SEGMENT FOR STATISTICAL
c          OPERATIONS, DATA WINDOW TYPE, PDF CLASSES AND NUMBER OF
c          AUTO AND CROSS-SPECTRAL COMPONENTS TO FREQUENCY AVERAGE.
c          MEMORY ALLOCATION IS ALSO PERFORMED BY THIS COMMAND.
c
c       FIELD   FORMAT            VARIABLE          DEFAULT VALUE
c       ------------------------------------------------------------
c       1-8     1X,I4,3X          ILINE             0
c       9-16    A8                TYPE              ='FFTSIZE '
c       17-24   8X                NONE              NONE
c       25-32   I8                R                 NONE
c       33-40   I8                NDSEG             1
c       41-48   I8                NFSEG             1
c       49-56   I8                KCLASS            0
c       57-64   I8                IW                0
c       65-72   F8.4              W                 NONE
c       73-80   I8                LAVE              0
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -        DCASS5 COMMAND LINE NUMBERS
c       TYPE    -        COMMAND NAME
c       R       -        FFT SIZE N = 2**R
c       NDSEG   -        NUMBER OF SUB-SEGMENTS PER FFT SEGMENT TO
c                        AVERAGE DATA STATISTICS. (ONLY OPERATE IF
c                        NFSEG EQUALS ONE)
c       NFSEG   -        NUMBER OF FFT SEGMENTS TO AVERAGE DATA
c                        STATISTICS AND AUTO AND CROSS SPETRA
c                        (IF NFSEG = 1 NDSEG MUST BE EQUAL TO ONE ALSO)
c       KCLASS  -        NUMBER OF CLASSES FOR THE PROBABLITY DENSITY
c                        FUNCTION (PDF) CALCULATION IN DCASS COMMAND
c                        'DATASTAT'. (KCLASS+2 POCKETS)
c       IW      -        DATA WINDOW INDEX TO SELECT WINDOW TYPE TO BE
c                        USED IN 'WINDOW ' COMMAND. IF IW EQUALS:
c                        1 - RECTANGULAR WINDOW
c                        2 - STANDARD EXTENDED COSINE BELL ( W = 10.0% )
c                        3 - FULL COSINE BELL (HANNING WINDOW)
c                        4 - TRIANGULAR WINDOW (BARTLETT WINDOW)
c                        5 - NON-STANDARD EXTENDED COSINE BELL
c                             ( W TAPER PERCENTAGE SET BY USER )
c                        6 - SAME AS IW=5 BUT ALSO SQUARED
c       W       -        TOTAL PERCENTAGE TO TAPER FOR IW=5,6 ( 100% = 1.0 )
c       LAVE    -        A NUMBER WHICH DETERMINES THE NUMBER OF FREQUENCY
c                        COMPONENTS TO AVERAGE FOR AUTO AND CROSS-SPECTRAL
c                        CALCULATIONS BY THE RELATION (2*LAVE)+1 .
c                        ( ALWAYS ODD  1,3,5,7,9, ... ,ECT )  THIS VARIABLE WILL
c                        EFFECTS THE NUMBER OF DEGREES OF FREEDOM OF THE
c                        AUTO AND CROSS-SPECTRAL ESTIMATES.
```

```
c     DCASS5 - VERSION 1.0 A                                     'FILTER  ' COMMAND
c
c
c                              'FILTER  ' COMMAND
c
c
c        PURPOSE - TO FILTER A DATA TRACE USING THE FIR FILTER SET
c                  BY THE 'SAVEFILT' COMMAND
c
c
c        FIELD          FORMAT              VARIABLE
c        ------------------------------------------------------
c
c         1- 8          1X,I4,3X            ILINE
c         9-16          A8                  TYPE
c        17-32          16X                  NONE
c        33-40          I8                   IZS
c
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        IZS    - MEMORY VECTOR TO FILTER
c
c
```

```
c DCASS5  -  VAX VERSION 1.0A                              'GEOMDATA-1'
c
c                   'GEOMDATA' COMMAND
c
c PURPOSE - TO OPEN AND READ IN GEOMETRY DATA FOR DATA SET
c
c
c       FIELD   FORMAT             VARIABLE         DEFAULT VALUE
c       -------------------------------------------------------
c
c       1-8     1X,I4,3X           ILINE            NONE
c       9-16    A8                 TYPE             ='GEOMDATA'
c       17-32   16X                NONE             NONE
c       33-40   2A4                GEONAM           NONE
c       41-56   16X                NONE             NONE
c       57-64   I8                 LUNGEO           1
c       65-72   I8                 LUNLST           LUNLOG
c       73-80   8X                 NONE             NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE    -       DCASS COMMAND LINE NUMBER
c       TYPE     -       COMMAND NAME
c       GEONAM   -       8 CHARACTER NAME OF GEOMETRY
c       LUNGEO   -       LOGICAL UNIT NUMBER FOR GEOMETRY FILE INPUT
c       LUNLST   -       LOGICAL UNIT TO SEND GEOMETRY DATA ECHO
c
c
```

```
c DCASS 5 VERSION 1.0 A                                          'GOSUB' COMMAND
c
c
c
c                               'GOSUB' COMMAND
c
c
c
c       PURPOSE - TO EXECUTE A GROUP OF COMMAND CARDS WHICH END WITH RETURN
c
c
c       FIELD              FORMAT               VARIABLE
c       ------------------------------------------------------------
c        1- 8              1X,I4,3X             ILINE
c        9-16              A8                   TYPE
c       17-24              8X                   NONE
c       25-32              I8                   JUMPS
c
c
c
c
c
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       JUMPS     - DCASS5 LINE NUMBER FOR THE SUBROUTINUE
c
```

```
c DCASS 5 VERSION 1.0 A
c
c
c
c                         'GOTO    ' COMMAND
c
c
c
c PURPOSE- TO INITIATE AN UNCONDITIONAL JUMP TO A NEW COMMAND
c          WITHIN THE ANANLYSIS FILE CARD IMAGES STORED IN MEMORY
c
c
c       FIELD                FORMAT               VARIABLE
c       ---------------------------------------------------------
c        1- 8                1X,I4,3X             ILINE
c        9-16                A8                   TYPE
c       17-24                8X                   NONE
c       25-32                I8                   JUMP
c
c
c
c
c
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       JUMP      - DCASS5 LINE NUMBER TO EXECUTE NEXT
c
```

```
c   DCASS5 - VERSION 1.0 A                                   'IF      ' COMMAND
c
c
c                           'IF      ' COMMAND
c
c
c     PURPOSE - TO CONDITIONALLY TRANSFER COMMON TO A NEW DCASS5 ANALYSIS
c               CARD IMAGE
c
c
c     FIELD         FORMAT            VARIABLE
c     ------------------------------------------------------------
c      1- 8         1X,I4,3X          ILINE
c      9-16         A8                TYPE
c     17-24         A8                CIFKEY
c     25-32         8X                CIFNAM
c     33-40         A8                CIFLOOP
c     41-48         I8                IFVAL
c     49-56         A8                CIFGO
c     57-64         I8                CIFJMP
c
c
c     VARIABLE DESCRIPTION
c     --------------------
c
c     CIFKEY    - PARAMETER ON WHICH TO KEY IF STATEMENT
c                 POSSIBLE VALUES;
c                 'CHANNEL  ' - LOGICAL CHANNEL NUMBER
c                 'SHOT     ' - SHOT NUMBER
c                 'SEQCHAN  ' - SEQUENTIAL CHANNEL NUMBER
c                 'SEQFILE  ' - SEQUENTIAL FILE NUMBER
c                 'FFID     ' - FIELD RECORD NUMBER
c                 'LASTR    ' - LAST TRACE IN FILE
c                 'LOOP ON  ' - NAME OF FILE (CLOOP IS MATCHED)
c     CIFNAM    - LOOP TO KEY ON
c                 ONLY USED IF CIFKEY EQUALS 'LOOP ON'
c     CIFLOOP   - CONDITION TO TEST POSSIBLE VALUES
c                 POSSIBLE VALUES
c                 'EQUAL      ' , 'NOTEQUAL    '
c                 'LESSTHAN   ' , 'MORETHAN    '
c                 'LESSOREQ   ' , 'MOREOREQ    '
c     IFVAL     - CONDITIONAL VALUE TO TEST
c     CIFGO     - CONTROL TRANSFER IF CONDITION IS TRUE
c                 POSSIBLE BALUES
c                 'GO TO' - OF TRUE JUMP TO LINE CIFJUMP
c                 'THEN ' - IF TRUE TRANSFER TO NEXT STATEMENT
c                           IF NOT TRANSFER TO END_IF STATEMENT
c                 'AND  ' - PERMITS CONDITIONAL TRANSFER OF BOTH OF TWO
c                           CONDITIONS ARE TRUE
c                 'OR   ' - PERMIT IF EITHER OF TWO CONDITIONS ARE TRUE
c     CIFJMP    - DCASS5 LINE NUMBER TO JUMP TO IF STATEMENT IS TRUE
c                 (USED IF CIFGO = 'GO TO')
```

```
c DCASS -   VAX VERSION 1.0A
c
c                          'LISTANAL' COMMAND
c
c PURFOSE- TO LIST THE COMMAND CARD IMAGE THREAD STORED IN MEMORY
c          BY THE 'ANALYSIS' COMMAND TO A SPECIFIED LOGICAL
c          UNIT NUMBER.
c
c       FIELD   FORMAT             VARIABLE          DEFAULT VALUE
c       ----------------------------------------------------------------
c       1-8     1X,I4,3X           ILINE             0
c       9-16    A8                 TYPE              ='LISTANAL'
c       17-24   8X                 NONE              NONE
c       25-32   8X                 NONE              NONE
c       33-40   I8                 LUNLST            NONE
c       41-48   8X                 NONE              NONE
c       49-56   8X                 NONE              NONE
c       57-64   8X                 NONE              NONE
c       65-72   8X                 NONE              NONE
c       73-80   8X                 NONE              NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       COMMAND NAME
c       LUNLST  -       LOGICAL UNIT NUMBER TO LIST ANALYSIS COMMAND
c                       CARD IMAGE THREAD INFORMATION TO .
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                    'LISTPDF ' COMMAND
c
c                           'LISTPDF ' COMMAND
c
c PURPOSE- TO LIST THE PROBABILITY DENSITY FUNCTION OR HISTOGRAM
c          OF THE INPUT AND OUTPUT CHANNELS OF A PROCESS
c
c       FIELD . FORMAT             VARIABLE          DEFAULT VALUE
c       -------------------------------------------------------------
c       1-8      1X,I4,3X          ILINE             0
c       9-16     A8                TYPE              ='LISTPDF '
c       17-24    8X                NONE              NONE
c       25-32    I8                IZS1              0
c       33-40    8X                NONE              NONE
c       41-48    I8                IZS2              0
c       49-56    8X                NONE              NONE
c       57-64    I8                LUNPDF            0
c       65-72    8X                NONE              NONE
c       73-80    8X                NONE              NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE    -       DCASS5 COMMAND LINE NUMBER
c       TYPE     -       COMMAND NAME
c       IZS1     -       INPUT CHANNEL MEMORY TRACE VECTOR NUMBER
c       IZS2     -       OUTPUT CHANNEL MEMORY TRACE VECTOR NUMBER
c       LUNPDF   -       LOGICAL UNIT NUMBER TO LIST PDF
c
```

```
c DCASS -   VAX VERSION 1.0A                                   'LISTSTAT' COMMAND
c
c                        'LISTSTAT' COMMAND
c
c PURPOSE- TO DUMP AN ASCII LISTING TO THE SPECIFIED LOGICAL UNIT
c          NUMBER OF THE RESULTS OF COMMAND 'DATASTAT'
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ---------------------------------------------------------------
c       1-8     1X,I4,3X        ILINE           0
c       9-16    A8              TYPE            ='LISTSTAT'
c       17-24   8X              NONE            NONE
c       25-32   8X              NONE            NONE
c       33-40   I8              ISZ             NONE
c       41-48   8X              NONE            NONE
c       49-56   I8              LUNSTA          NONE
c       57-64   8X              NONE            NONE
c       65-72   8X              NONE            NONE
c       73-80   8X              NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       COMMAND NAME
c       IZS     -       MEMORY VECTOR TO LIST
c       LUNSTA  -       LOGICAL UNIT NUMBER TOOLIST STATISTICS
c
c
c
c
```

```
c DCASS -    VAX VERSION 1.0A
c
c                        'LISTRANS' COMMAND
c
c PURFOSE- TO DUMP AN ASCII LISTING TO THE SPECIFIED LOGICAL UNIT
c          NUMBER OF THE RESULTS OF COMMAND 'TRANSFER'
c
c         FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c         ---------------------------------------------------------
c         1-8     1X,I4,3X        ILINE           0
c         9-16    A8              TYPE            ='LISTRANS'
c         17-24   8X              NONE            NONE
c         25-28   I4              IZS1            0
c         29-32   I4              IZS2            0
c         33-40   F8.3            ENGY1           0
c         41-48   F8.3            ENGY2           0
c         49-56   F8.3            FSTOP           0.0
c         57-64   I8              LUNH12          0
c         65-72   I8              IHTYP           0
c         73-80   I8              IHSKP           0
c
c         VARIABLE DESCRIPTION
c         --------------------
c
c         ILINE    -      DCASS5 COMMAND LINE NUMBER
c         TYPE     -      COMMAND NAME
c         IZS1     -      INPUT CHANNEL MEMORY VECTOR
c         IZS2     -      OUTPUT CHANNEL MEMORY VECTOR
c         ENGY1    -      IF % OF VARIANCE FOR COMPONENT IS LESS THAN
c                         ENGY1 THEN INHIBIT LISTING OF COMPOENT
c                         ( FOR INPUT CHANNEL )
c         ENGY2    -      SAME AS ENGY1 BUT FOR OUTPUT TRACE
c         FSTOP    -      FREQUENCY AT WHICH TO STOP LISTING
c         LUNH12   -      LOGICAL UNIT NUMBER TO SEND LISTING TO
c         IHTYP    -      0=SINE WAVE ENERGY/1=TRANSIENT OR RANDOM DATA
c                         0=AMPLITUDE/1=PSD
c         IHSKP    -      NUMBER OF COMPONENTS TO SKIP
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A
c
c                          'LISTVECT' COMMAND
c
c PURPOSE- TO DUMP AN ASCII LISTING OF THE SPECIFIED VECTOR FOR DEBUGGING
c          AND DATA EDITING.
c
c        FIELD   FORMAT            VARIABLE         DEFAULT VALUE
c        ---------------------------------------------------------------------
c        1-8     1X,I4,3X          ILINE            0
c        9-16    A8                TYPE             ='LISTVECT'
c        17-24   8X                NONE             NONE
c        25-32   I8                IZS              NONE
c        33-40   8X                NONE             NONE
c        41-48   I8                IS               NONE
c        49-56   8X                NONE             NONE
c        57-64   I8                IE               NONE
c        65-72   8X                NONE             NONE
c        73-80   I8                LUNLST           NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    -       DCASS5 COMMAND LINE NUMBER
c        TYPE     -       COMMAND NAME
c        IZS      -       MEMORY VECTOR TO LIST
c        IS       -       STARTING INDEX
c        IE       -       ENDING INDEX
c
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                              'LOADTRAC'-1
c
c                        'LOADTRAC' COMMAND
c
c PURFOSE- TO LOAD THE NEXT SEQUENTIAL TRACE FROM A RAW DATA TAPE
c          AS SPECIFIED BY DCASS5 COMMANDS 'MOUNTGIN', 'TAPETYPE'
c          AND 'TAPEFIND' .
c
c
c       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
c       -----------------------------------------------------------------
c
c       1-8     1X,I4,3X         ILINE           NONE
c       9-16    A8               TYPE           ='LOADTRAC'
c       17-32   16X              NONE            NONE
c       33-40   I8               IZS             0
c       41-80   NONE             NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       DCASS5 COMMAND = 'LOADTRAC'
c       IZS     -       MEMORY VECTOR NUMBER TO STORE TRACE AND
c                       TRACE HEADER
c
c
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                   'LOOP     ' COMMAND
c
c                         'LOOP     ' COMMAND
c
c PURPOSE- TO INITIATE LOOPING ON ANALYSIS CARD IMAGES
c         ( USED WITH 'ENDLOOP ' COMMAND )
c
c       FIELD   FORMAT            VARIABLE          DEFAULT VALUE
c       -------------------------------------------------------------------
c       1-8     1X,I4,3X          ILINE             0
c       9-16    A8                TYPE              ='LOOP    '
c       17-24   8X                NONE              NONE
c       25-32   I8                NLOOP(JLOOP)      NONE
c       33-40   8X                NONE              NONE
c       41-48   A8                CLOOP(JLOOP)      NONE
c       49-56   8X                NONE              NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE    -        DCASS5 COMMAND LINE NUMBER
c       TYPE     -        COMMAND NAME
c       NLOOP() -         NUMBER OF TIMES TO LOOP FOR LOOP NUMBER JLOOP
c       CLOOP() -         NAME OF LOOP JLOOP NEEDED (USED WITH 'IF' )
C       JLOOP    -        NOT INPUT BUT INCREMENTED EACH TIME 'LOOP'
c                         EXECUTED ( 'ENDLOOP ' DECREMENTS JLOOP )
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                              'MOTION  '-1
c
c                        'MOTION  ' COMMAND
c
c
c PURFOSE- TO CONVERT THE FFT STORED IN THE SPECIFIED MEMORY
c          VECTOR FROM ACELLERATION OR VELOCITY INFORMATION TO
c          DISPLACEMENT FREQUENCY DOMAIN INFORMATION.
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ------------------------------------------------------------
c
c       1-8     1X,I4,3X        ILINE           NONE
c       9-16    A8              TYPE            ='MOTION  '
c       17-32   16X             NONE            NONE
c       33-40   I8              IZS             0
c       41-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       DCASS5 COMMAND = 'MOTION  '
c       IZS     -       MEMORY VECTOR TO CONVERT
c
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                         'MOUNTGIN' COMMAND
c
c                          'MOUNTGIN' COMMAND
c
c PURPOSE        - TO MOUNT A NON-FORTRAN TAPE OF SPECIFIED GENERAL FORMAT
c
c       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
c       -------------------------------------------------------------
c       1-8     1X,I4,3X         ILINE           0
c       9-16    A8               TYPE            ='MOUNTGIN'
c       17-24   8X               NONE            NONE
c       25-32   2A4              REELI           NONE
c       33-40   8X               NONE            NONE
c       41-48   I8               DENSE           1600
c       49-56   8X               NONE            NONE
c       57-60   A4               FORMAT          'GINO'
c       61-80                    NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBERS
c       TYPE    -       COMMAND NAME
c       REELI   -       8 CHARACTER TAPE REEL NAME
c       DENSI   -       DENSITY OF TAPE (800,1600,AND 6250)
c       FORMAT  -       AT THIS TIME, ONLY GINO FORMAT AVAILABLE
c
c
```

```
c DCASS -    VAX VERSION 1.0A
c
c                        'MOVEVECT' COMMAND
c
c PURPOSE- TO MOVE THE LOCATION OF A TRACE FOR ONE MEMORY VECTOR
c          TO ANOTHER.
c
c        FIELD   FORMAT            VARIABLE         DEFAULT VALUE
c        ----------------------------------------------------------------
c        1-8     1X,I4,3X          ILINE            0
c        9-16    A8                TYPE             ='MOVEVECT'
c        17-24   8X                NONE             NONE
c        25-32   I8                ISZ1             NONE
c        33-40   8X                NONE             NONE
c        41-48   8X                NONE             NONE
c        49-56   I8                IZS2             NONE
c        57-64   I8                IHEAD            NONE
c        65-72   8X                NONE             NONE
c        73-80   8X                NONE             NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    -       DCASS5 COMMAND LINE NUMBER
c        TYPE     -       COMMAND NAME
c        IZS1     -       MEMORY VECTOR TO MOVE
c        IZS2     -       MEMORY VECTOR TO PUT VECTOR IZS1 IN
c        IHEAD    -       LOGICAL SWITCH WHICH DETERMINES IF THE
c                         TRACE HEADER IS MOVED ALSO
c                         0 - MOVE TRACE HEADER ALSO
c                         1 - DO NOT MOVE TRACE HEADER
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                'MUTEVECT' COMMAND
c
c                       'MUTEVECT' COMMAND
c
c PURPOSE- TO SET A SPECIFIED RANGE OF A SPECIFIED MEMORY VECTOR TO ZERO
c          FOR DATA EDITING.
c
c        FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c        ---------------------------------------------------------------
c        1-8     1X,I4,3X         ILINE            0
c        9-16    A8               TYPE             ='MUTEVECT'
c        17-24   8X               NONE             NONE
c        25-32   I8               IZS              NONE
c        33-40   8X               NONE             NONE
c        41-48   8X               NONE             NONE
c        49-56   I8               IB               NONE
c        57-64   8X               NONE             NONE
c        65-72   I8               IE               NONE
c        73-80   8X               NONE             NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE   -       DCASS5 COMMAND LINE NUMBER
c        TYPE    -       COMMAND NAME
c        IZS     -       MEMORY VECTOR TO MUTE
c        IB      -       STARTING INDEX
c        IE      -       ENDING INDEX
c
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A
c
c                          'OPENCOMD' COMMAND
c
c PURPOSE - TO OPEN A FILE CONTAINING DCASS COMMANDS AND THEN EXECUTE
c           THE COMMANDS BY DIRECTING SUBROUTINE GETCMD TO THIS FILE
c
c
c       FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c       ------------------------------------------------------------
c
c       1-8     1X,I4,3X         ILINE            NONE
c       9-16    A8               TYPE            ='OPENCOMD'
c       17-24   8X               NONE
c       25-48   6A4              CMDFIL
c       49-56   8X               NONE
c       57-64   I8               LUNCMD
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE    -      DCASS CARD IMAGE LINE NUMBER
c       TYPE     -      COMMAND NAME
c       CMDFIL   -      NAME OF FILE
c       LUNCMD   -      LOGICAL UNIT NUMBER TO ATTACH TO FILE
c
c
c
c
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                                    'OPENDATA'-1
c
c                          'OPENDATA' COMMAND
c
c PURPOSE - TO OPEN A FILE CONTAINING RAW OR FFT DATA IN
c               DCASS5 FORMAT
c
c
c         FIELD   FORMAT            VARIABLE        DEFAULT VALUE
c         ---------------------------------------------------------------
c
c         1-8     1X,I4,3X          ILINE           NONE
c         9-16    A8                TYPE           ='USERVERS'
c         17-48   6A4               SEQFIL          NONE
c         49-56   8X                NONE
c         57-64   I8                LUNSQI
c         65-80   NONE              NONE            NONE
c
c         VARIABLE DESCRIPTION
c         --------------------
c
c         ILINE   -        DCASS5 COMMAND LINE NUMBER
c         TYPE    -        DCASS5 COMMAND = 'USERVERS'
c         SEQFIL  -        NAME OF DCASS5 DATA FILE TO OPEN DCASS5 DATA
c         LUNSQI  -        LOGICAL UNIT NUMBER TO ATTACH TO DCASS5 FILE
c
c
c
c
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                                  'OPENECHO'-1
c
c                          'OPENECHO' COMMAND
c
c PURPOSE - TO OPEN A FILE FOR SAVING DCASS5 EXECUTION LOG FILE
c           INFORMATION WHICH IS DUMPED DURING PERIODS WHERE
c           THE 'ECHO ON ' COMMAND IS ACTIVE.
c
c
c      FIELD   FORMAT             VARIABLE         DEFAULT VALUE
c      ---------------------------------------------------------------
c
c      1-8     1X,I4,3X           ILINE            NONE
c      9-16    A8                 TYPE             ='OPENECHO'
c      17-24   8X                 NONE
c      25-48   6A4                LOGFIL
c      49-56   8X                 NONE
c      57-64   I8                 LUNLOG           LUNLST
c
c      VARIABLE DESCRIPTION
c      --------------------
c
c      ILINE   -       DCASS5 COMMAND LINE NUMBER
c      TYPE    -       DCASS5 COMMAND = 'OPENECHO'
c      LOGFIL  -       NAME OF FILE
c      LUNLOG  -       LOGICAL UNIT NUMBER TO ATTACH TO FILE
c
c
c
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                                   'OPENLIST'-1
c
c                          'OPENLIST' COMMAND
c
c PURPOSE - TO OPEN A FILE FOR SAVING DCASS5 OUTPUT, SUCH AS TIME
c           DOMAIN STATISTICS, FOR LATER OUTPUT ON LINE PRINTER SYSTEM
c
c
c       FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c       ------------------------------------------------------------------
c
c       1-8     1X,I4,3X         ILINE            NONE
c       9-16    A8               TYPE            ='OPENLIST'
c       17-24   8X               NONE
c       25-48   6A4              LSTFIL
c       49-56   8X               NONE
c       57-64   I8               LUNLST           LUNLOG
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       DCASS5 COMMAND = 'USERVERS'
c       LSTFIL  -       NAME OF FILE
c       LUNLST  -       LOGICAL UNIT NUMBER TO ATTACH TO FILE
c
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A
c
c                      'OPENSEQO' COMMAND
c
c PURPOSE- TO OPEN A DCASS OUTPUT FILE AND ATTACH IT TO A SPECIFIED
c          LOGICAL UNIT NUMBER AND DCASS MEMORY VECTOR NUMBER
c
c
c        FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c        -------------------------------------------------------
c        1-8     1X,I4,3X        ILINE           0
c        9-16    A8              TYPE            -'OPENSEQO'
c        17-24   8X              NONE            NONE
c        25-48   6A4             DFILE(1),(2)    [.DCASS]
c                                DFILE(3),(4)    'FILCMD'
c                                DFILE(5)        'SET'
c                                DFILE(6)        'VERS'
c        49-56   8X              NONE            NONE
c        57-64   I8              LUNSQO          NONE
c        65-72   8X              NONE            NONE
c        73-80   I8              IZS             NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE  -      DCASS5 COMMAND LINE NUMBERS
c        TYPE   -      COMMAND NAME
c        DFILE  -      24 CHARECTER FILE NAME OF DCASS OUTPUT FILE
c                      OF A FORMAT SUCH AS
c                              '[.DCASS]SHOT0001.RAW;1  '
c                              '[.DCASS]        .RAW    '
c                              '[.DCASS]        .FFT    '
c                              '                .STA    '
c                              ETC.
c                              THE BLANK SPACES ARE FILLED IN WITH
c                              DEFAULT VALUES
c        LUNSQO -      LOGICAL UNIT NUMBER FOR OUTPUT FILE
c        IZS    -      DCASS MEMORY VECTOR NUMBER TO ATTACH TO THE FILE
c
```

```
c DCASS -   VAX VERSION 1.0A                                  'PLOTCHAN' COMMAND
c
c                         'PLOTCHAN' COMMAND
c
c PURPOSE- TO PLOT A TRACE OR MULTIPLE TRACE ON A CALCOMP
c          FLATBED PLOTTER.
c
c        FIELD    FORMAT             VARIABLE         DEFAULT VALUE
c        -----------------------------------------------------------
c        1-8      1X,I4,3X           ILINE            0
c        9-16     A8                 TYPE             ='PLOTCHAN'
c        17-24    8X                 NONE             NONE
c        25-32    8X                 NONE             NONE
c        33-40    I8                 IZS              NONE
c        41-48    I8                 ISECT            1
c        49-56    F8.4               TRCPIN           0.5
c        57-64    F8.4               SECPIN           SECPLT/10.0
c        65-72    F8.4               STRTIM           0.0
c        73-80    F8.2               SECPLT           TRECM
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE   -       DCASS5 COMMAND LINE NUMBERS
c        TYPE    -       COMMAND NAME
c        IZS     -       MEMORY VECTOR TO PLOT
c        ISECT   -       TYPE OF PLOT (1 OR 2)
c        TRCPIN  -       TRACE PER INCH VERTICALLY
c        SECPIN  -       SECONDS PER INCH
c        STRTIM  -       STARTING TIME FOR PLOT IN SECONDS
c        SECPLT  -       SECONDS TO PLOT AFTER STRTIM
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                  'PLOTRANS' COMMAND
c
c                          'PLOTRANS' COMMAND
c
c PURPOSE- TO PLOT THE RESULTS OF DCASSS COMMAND 'TRANSFER' ON
c          THE CALCOMP FLATBED PLOTTER. FUNCTIONS PLOTTED ARE:
c          AUTO-SPECTRUM OF INPUT  G11
c          AUTO-SPECTRUM OF OUTPUT G22
c          CROSS-SPECTRUM OF INPUT/OUTPUT  G12
c          MAGNITUDE OF TRANSFER FUNCTION  MAG[H12]
c          ARGUMENT  OF TRANSFER FUNCTION  ARG[H12]
c          COHERENCE BETWEEN INPUT AND OUTPUT FUNCTION
c
c        FIELD   FORMAT            VARIABLE        DEFAULT VALUE
c        -------------------------------------------------------------------
c
c        1-8     1X,I4,3X          ILINE           0
c        9-16    A8                TYPE            ='PLOTRANS'
c        17-24   I8                NTPLT           NONE
c        25-32   I8                ISPC            NONE
c        33-40   F8.4              HZLLIM          0.0
c        41-48   F8.4              HZULIM          NYQUIST HZ/2.0
c        49-56   F8.4              CHORLIM         0.0
c        57-64   F8.4              HZPIN           NONE
c        65-72   F8.4              STRHZ           0.0
c        73-80   F8.2              HZPLT           NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    -        DCASSS COMMAND LINE NUMBERS
c        TYPE     -        COMMAND NAME
c        NTPLT    -        NUMBER OF TRANSFER FUNCTION SET PLOTS
c                          PER CALCOMP FILE
c        ISPC     -        TYPE OF SPECRUM TO PLOT  ( 1 TO 32 )
c        HZLLIM   -        LOWER LIMIT IN HERTZ FOR RANGE OF THE
c                          FUNCTION TO LOOK FOR MAXIMUM SCALING FACTOR
c                          FOR PLOTTING
c        HZULIM   -        UPPER LIMIT IN HERTZ FOR THE RANGE OF THE
c                          FUNCTION TO LOOK FOR MAXIMUM SCALING FACTOR
c                          FOR PLOTTING
c        CHORLIM -         LOWER LIMIT OF THE COHERENCE FOR ACCEPTANCE OF MAXIMUMS
c                          FOUND IN RANGE DEFINED BY HZLLIM AND HZULIM
c        HZPIN    -        HERTZ PER INCH
c        STRHZ    -        STARTING FREQUENCY IN HERTZ
c        HZPLT    -        HERTZ TO PLOT AFTER STRHZ
```

```
C
C
C DCASSS - VAX VERSION 1.0 A                                        'PLOTSMAX' COMMAND
C
C
C
C
C                          'PLOTSMAX' COMMAND
C
C
C PURPOSE- TO SET MAXIMUM NUMBER OF PLOTS TO GENERATE
C
C
C       FIELD             FORMAT            VARIABLE          DEFAULT
C       --------------------------------------------------------------
C        1- 8             1X,I4,3X          ILINE             0
C        9-16             A8                TYPE              ='PLOTSMAX'
C       17-24             8X                NONE
C       25-32             I8                MXPLT
C
C
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       MXPLT   - MAXIMUM NUMBER OF PLOTS TO GENERATE
C
C
C
C
```

```
c DCASS -   VAX VERSION 1.0A
c
c                       'PLOTSPEC' COMMAND
c
c PURPOSE- TO BE USED WITH COMMAND 'PLOTCHAN' TO PLOT A
c          AUTO-SPECTRA NEXT TO THE TRACE ON THE TIME DOMAIN
c          SECTION (ISECT MUST EQUAL 2 !). IF ONLY THE SPETRA IS
c          DESIRED THEN THE COMMAND 'PLOTCHAN' IS CALLED WITH
c          SECPLOT EQUALS TO A VERY SMALL NUMBER.
c
c        FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c        ----------------------------------------------------------
c        1-8     1X,I4,3X        ILINE           0
c        9-16    A8              TYPE            ='PLOTSPEC'
c        17-24   8X              NONE            NONE
c        25-32   8X              NONE            NONE
c        33-40   I8              IZS             NONE
c        41-48   I8              ISPEC           1
c        49-56   F8.4            TRCPIN          0.5
c        57-64   F8.4            HZPIN           NONE
c        65-72   F8.4            STRHZ           0.0
c        73-80   F8.2            HZPLT           NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE   -       DCASS5 COMMAND LINE NUMBERS
c        TYPE    -       COMMAND NAME
c        IZS     -       AUTO-SPECTRA MEMORY VECTOR TO PLOT
c        ISPEC   -       TYPE OF SPECTRUM TO PLOT (1 TO 32)
c        TRCPIN  -       TRACE PER INCH VERTICALLY
c                        (MUST BE EQUAL TO THE VALUE USED IN COMMAND
c                         'PLOTCHAN')
c        HZPIN   -       HERTZ PER INCH
c        STRHZ   -       STARTING FREQUENCY IN HERTZ
c        HZPLT   -       HERTZ TO PLOT AFTER STRHZ
c
c
```

```
c DCASS5  -  VAX VERSION 1.0 A                                 'READTRAC'-1
c
c                          'READTRAC' COMMAND
c
c PURPOSE - TO READ NEXT SEQUENTIAL TRACE IN DCASS5 DATA FILE
c           OPENED BY THE 'OPENDATA' COMMAND WITH OPTION TO SKIP
c           TRACE IF SPECFIC GEOMETRY LINE IS NOT FOUND FOR TRACE
c
c
c        FIELD   FORMAT           VARIABLE         DEFAULT VALUE
c        -----------------------------------------------------------------
c
c        1-8     1X,I4,3X         ILINE            NONE
c        9-16    A8               TYPE             ='READTRAC'
c        17-32   164              NONE             NONE
c        33-40   I8               IZS              0
c        41-48   NONE             NONE
c        49-56   A4,4X            TMP8             '    '
c        57-64   8X               NONE             'UNTILL'
c        65-72   2A4              TMP3,TMP4        '        '
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    -       DCASS5 COMMAND LINE NUMBER
c        TYPE     -       DCASS5 COMMAND = 'USERVERS'
c        IZS      -       MEMORY VECTOR NUMBER TO STORE TRACE AND
c                         TRACE HEADER
c
c        TMP8     -       MUST EQUAL TO 'GEOM' TO INVOKE CONDITIONAL
c                         SKIPPING OF TRACES DEPENDENT ON GEOMETRY LINE
c                         NAMES
c        TMP3,
c        TMP4     -       8 CHARACTER GEOMERTY LINE NAME TO SEARCH FOR
c
c
c
```

```
c DCASS5 --  VAX VERSION 1.0 A                                'REALFFT '-1
c
c                        'REALFFT ' COMMAND
c
c
c PURPOSE- TO PERFORM THE FORWARD FAST FOURIER TRANSFORM ON THE
c          SPECFIED MEMORY VECTOR ( REAL TO COMPLEX )
c
c
c      FIELD   FORMAT         ARIABLE DEFAULT VALUE
c      --------------------------------------------------------------
c
c      1-8     1X,I4,3X       ILINE           NONE
c      9-16    A8             TYPE           ='REALFFT '
c      17-32   16X            NONE            NONE
c      33-40   I8             IZS             0
c      41-80   NONE           NONE            NONE
c
c      VARIABLE DESCRIPTION
c      --------------------
c
c      ILINE    -       DCASS5 COMMAND LINE NUMBER
c      TYPE     -       DCASS5 COMMAND = 'REALFFT '
c      IZS      -       MEMORY VECTOR TO FFT
c
c
c
c
c
```

```
C DCASS5  -  VAX VERSION 1.0 A                              'REALIFFT'-1
C
C                        'REALIFFT' COMMAND
C
C
C PURPOSE- TO PERFORM THE INVERSE FAST FOURIER TRANSFORM ON
C          THE SPECIFIED MEMORY VECTOR ( COMPLEX TO REAL )
C
C
C         FIELD   FORMAT           VARIABLE        DEFAULT VALUE
C         ---------------------------------------------------------------
C
C         1-8     1X,I4,3X         ILINE           NONE
C         9-16    A8               TYPE           ='REALIFFT'
C         17-32   16X              NONE            NONE
C         33-40   I8               IZS             0
C         41-80   NONE             NONE            NONE
C
C         VARIABLE DESCRIPTION
C         --------------------
C
C         ILINE    -       DCASS5 COMMAND LINE NUMBER
C         TYPE     -       DCASS5 COMMAND = 'REALIFFT'
C         IZS      -       MEMORY VECTOR TO IFFT
C
C
C
C
C
```

```
c DCASS -   VAX VERSION 1.0A                                        'RETURN ' COMMAND
c
c                           'RETURN ' COMMAND
c
c PURPOSE - TO RETURN FROM A DCASS SUBROUTINE CALL
c
c
c        FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c        ---------------------------------------------------------------
c        1-8     1X,I4,3X        ILINE           0
c        9-16    A8              TYPE            ='RETURN '
c        17-80   NONE            NONE            NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE   -       DCASS5 COMMAND LINE NUMBERS
c        TYPE    -       COMMAND NAME
c
c
c
c
c
c
c
c
```

```
C DCASS -    VAX VERSION 1.0A                                     'REWIND   ' COMMAND
C
C                           'REWIND   ' COMMAND
C
C PURPOSE- TO REWIND A RAW DATA TAPE ORDCASS INPUT OR OUTPUT FILE.
C
C
C       FIELD    FORMAT           VARIABLE         DEFAULT VALUE
C       --------------------------------------------------------------------
C       1-8      1X,I4,3X         ILINE            0
C       9-16     A8               TYPE             ='REWIND   '
C       17-24    8X               NONE             NONE
C       25-32    A8               RREEL            NONE
C       33-40    8X               NONE             NONE
C       41-48    I8               LUNRWN           NONE
C       49-80    NONE             NONE             NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE    -       DCASS5 COMMAND LINE NUMBERS
C       TYPE     -       COMMAND NAME
C       RREEL    -       SPECIFES WHAT FILE OR TAPE TO REWIND
C                        MUST BE ONE OF THE FOLLOWING:
C                        'REELI    ' - ACTUAL NAME OF REEL
C                                      FROM 'MOUNTGIN' COMMaND
C                        'SEQINPUT' - DCASS INPUT FILEE
C                                     (ONLY 1 INPUT FILE CAN
C                                      BE OPEN AT ONE TIME)
C                        'SEQOUT   ' - DCASS OUTPUT FILE
C       LUNRWN   -       LOGICAL UNIT NUMBER OF FILE TO REWIND
C                        (NOT NEEDED IF 'REELI' USED )
C
C
```

```
C DCASS -   VAX VERSION 1.0A                                 'RUNTITLE' COMMAND
C
C                            'RUNTITLE' COMMAND
C
C PURPOSE- TO ENTER A 64 CHARECTER ASCII TITLE TO BE USED TO IDENTIFY RUN
C
C
C         FIELD   FORMAT           VARIABLE        DEFAULT VALUE
C         --------------------------------------------------------------
C         1-8     1X,I4,3X         ILINE           0
C         9-16    A8               TYPE            ='RUNTITLE'
C         17-80   16A4             RUNTITL         64 BLANKS
C
C         VARIABLE DESCRIPTION
C         --------------------
C
C         ILINE   -      DCASS5 COMMAND LINE NUMBERS
C         TYPE    -      COMMAND NAME
C         RUNTITL -      64 CHARECTER RUN TITLE FOR DISPLAY PURPOSES
C
C
C
```

```
C DCASS -   VAX VERSION 1.0A                                'SADDVECT' COMMAND
C
C                          'SADDVECT' COMMAND
C
C
C PURPOSE- TO PERFORM ALGEBRAIC OPERATIONS ON ONE OR TWO VECTORS
C
C
C
C       FIELD   FORMAT          VARIABLE         DEFAULT VALUE
C       ------------------------------------------------------------------
C       1-8     1X,I4,3X        ILINE            0
C       9-16    A8              TYPE             ='SADDVECT'
C       17-24   6X,I2           IZS              NONE
C       25-40   2X,1PE14.7      SCL1             NONE
C       41-48   6X,I2           ISZ2             NONE
C       49-64   2X,1PE14.7      SCL2             NONE
C       65-72   6X,I2           IZS2             NONE
C       73-80   NONE            NONE             NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASSS COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C       IZS     -       VECTOR NUMBER TO STORE RESULT IN
C       SCL1    -       MULTIPLIER FOR VECTOR IZS1
C       IZS1    -       FIRST MEMEORY VECTOR TO OPERATE ON
C       SCL2    -       MULTIPLIER FOR VECTOR IZS2
C       IZS2    -       SECOND MEMORY VECTOR TO OPERATE ON
C
C       THE RESULT IS COMPUTED AS FOLLOWS:
C
C       VECT(IZS(K) = SCL1 * VECTIZS1(K) + SCL2 * VECTIZS2(K)
C
C       K = 1,2,3 ... NDATAT
C
```

```
C
C DCASS5 - VAX VERSION 1.0 A                                   'SAVEFILT'
C
C
C                         'SAVEFILT' COMMAND
C
C
C PURPOSE- TO SET THE FIR FILTER RESPONCE TO USE WITH 'FILTER' COMMAND
C
C
C       FIELD            FORMAT           VARIABLE         DEFAULT
C       ------------------------------------------------------------
C
C        1- 8            1X,I4,3X         ILINE            0
C        9-16            A8               TYPE             ='SAVEFILT'
C       17-20            4X               NONE
C       21-24            I4               IFILT            0
C       25-32            A8               FILTYP           NONE
C       33-40            8X               NONE
C       41-48            F8.3             B1
C       49-56            8X               NONE
C       57-64            F8.3             B2
C       65-68            4X               NONE
C       69-72            I4               M
C       73-76            4X               NONE
C       77-80            I4               R
C
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       IFILT   - NOT USED
C       FILTYP  - TYPE OF ORMSBY FIR TO DESIGN
C                 POSSIBLE VALUES
C                 '  LOWPASS' - LOW PASS FROM B1 HERTZ
C                 ' HIGHPASS' - HIGH PASS FROM B1 HERTZ
C                 ' BANDPASS' - BAND PASS FROM B1 TO B2 HERTZ
C                 ' BANDSTOP' - BAND STOP FROM B1 TO B2 HERTZ
C
C       B1      - FREQUENCY PARAMETER ONE
C       B2      - FREQURNCY PARAMETER TWO
C       M       - LENGTH OF FILTER
C       R       - LENGTH OF FILTER FFT SEGMENT SIZE EQAULS R TO
C                 THE POWER OF TWO
C
C
```

```
C DCASS5 - VAX VERSION 1.0 A                              'SETUPDAT'-1
C
C                      'SETUPDAT' COMMAND
C
C PURPOSE - TO OPEN SETUPDAT FILE WHICH CONTAINS INFORMATION WHICH
C           INCLUDE THE CHANNEL 4-CHARACTER NAMES
C
C
C       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
C       -------------------------------------------------------------
C
C       1-8     1X,I4,3X        ILINE           0
C       9-16    A8              TYPE            ='SETUPDAT'
C       17-40   24X             NONE            NONE
C       41-48   A4,4X           SETD            NONE
C       49-56   8X              NONE            NONE
C       57-64   I8              LUNSET          1
C       65-72   I8              LUNSET          LUNLOG
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBER
C       TYPE    -       DCASS5 COMMAND = 'USERVERS'
C       SETD    -       FILE EXTENT OF SETUPDAT FILE NAME
C                       [.#####]SETUPDAT.### WHERE .### = SETD (NOTE FIRST
C                       CHARACTER MUST BE A PERIOD) AND [.#####] IS
C                       THE DEFAULT SUB-DIRECTORY [.DCASS] OR ANOTHER
C                       5-CHARACTER SUB-DIRECTORY SET BY THE 'USERVERS'
C                       COMMAND
C       LUNSET  -       LOGICAL UNIT NUMBER ATTACHED TO FILE FOR READING
C                       OF SETUPDATA FILE INFORMATION
C       LUNLST  -       LOGICAL UNIT TO PRINT SETUPDATA
C
C
C
C
```

```
c DCASS -   VAX VERSION 1.0A
c
c                                  'SKIPCHAN' COMMAND
c
c
c        PURPOSE - TO SKIP A FORTRAN FORMAT TRACE ON TAPE OR DISK FILE
c
c        FIELD        FORMAT          VARIABLE
c        ---------------------------------------------------------
c         1- 8        1X,I4,3X        ILINE
c         9-16        A8              TYPE
c        17-24        8X              NONE
c        25-32        I8              IFSSKP
c
c
c
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        IFSSKP  - NUMBER OF TRACES TO SKIP
c
```

```
c DCASS -   VAX VERSION 1.0A                              'SKIPHEAD' COMMAND
c
c                                'SKIPHEAD' COMMAND
c
c
c        PURPOSE - TO SKIP THE FILE HEADER IN A DCASS5 FORMAT FILE
c
c        FIELD        FORMAT           VARIABLE
c        ---------------------------------------------------------
c         1- 8        1X,I4,3X         ILINE
c         9-16        A8               TYPE
c        17-80        NONE             NONE
c
c
c
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE   -       DCASS5 COMMAND LINE NUMBER
c        TYPE    -       COMMAND NAME
c
c
c
c
```

```
c DCASS5  -   VAX VERSION 1.0 A
c
c                          'SPECTRA ' COMMAND
c
c
c PURPOSE-  TO COMPUTE THE AUTO-SPECTRA OF THE SPECIFIED MEMORY
c           VECTOR. FREQUENCY DOMAIN SPECTRAL STATISTICAL INFORMATION
c           SUCH AS MOMENTS ,  MEAN PERIODS AND PEAK-TO-PEAK VALUES
c           ARE ALSO CALCULATED AND STORED IN THE TRACE HEADER. THE
c           AUTO-SPECTRA IS STORED AS DETERMINED BY COMMAND 'FFTSIZE '
c           AFTER THE LAST TRACE MEMORY VECTOR (VECTOR 4) .
c
c
c         FIELD   FORMAT            VARIABLE          DEFAULT VALUE
c         ---------------------------------------------------------------
c
c         1-8     1X,I4,3X          ILINE             NONE
c         9-16    A8                TYPE              ='SPECTRA '
c         17-32   16X               NONE              NONE
c         33-40   I8                IZS               0
c         41-80   NONE              NONE              NONE
c
c         VARIABLE DESCRIPTION
c         --------------------
c
c         ILINE   -        DCASS5 COMMAND LINE NUMBER
c         TYPE    -        DCASS5 COMMAND = 'SPECTRA '
c         IZS     -        MEMORY VECTOR TO COMPUTE AUTO-SPECTRA
c
c
c
c
c
```

```
c DCASS -   VAX VERSION 1.0A                                          *STOP     * COMMAND
c
c                            *STOP     * COMMAND
c
c PURPOSE- TO STOP EXECUTION OF PROGRAM DCASS5 USING THE STOP SUBROUTINE
c
c
c        FIELD   FORMAT            VARIABLE        DEFAULT VALUE
c        ------------------------------------------------------------
c        1-8     1X,I4,3X          ILINE           0
c        9-16    A8                TYPE            ='STOP    '
c        17-80   NONE              NONE            NONE
c
c        VARIABLE DESCRIPTION
c        --------------------
c
c        ILINE    -       DCASS5 COMMAND LINE NUMBERS
c        TYPE     -       COMMAND NAME
c
c
c
c
c
c
c
```

```
c
c DCASS5 -  VAX VERSION 1.0 A                                 'STOREGEO' COMMAND
C
C
C                        'STOREGEO' COMMAND
C
C
C PURPOSE- TO REPLACE THE GEOMETRY INFORMATION IN TRACE HEADER STORED
C          BY 'CALIBRAT' COMMAND WITH NEW INFORMATION
C
C
C       FIELD           FORMAT          VARIABLE        DEFAULT
C       ---------------------------------------------------------
C
C        1- 8           1X,I4,3X        ILINE           0
C        9-16           A8              TYPE            ='STOREGEO'
C       17-32           16X             NONE
C       33-40           I8              IZS
C
C
C
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBER
C       TYPE    -       COMMAND NAME
C       IZS     -       MEMORY VECTOR TO REPLACE DATA
C
C
```

```
C DCASS -   VAX VERSION 1.0A                                 'SUMMARY ' COMMAND
C
C                         'SUMMARY ' COMMAND
C
C PURPOSE- TO LIST TO THE SPECIFIED LOGICAL UNIT NUMBER A TABLE
C          LISTING THE NUMBER OF TIMES EACH DCASS5 COMMAND WAS
C          EXECUTED AND THE PERCENTAGES OF WALL CLOCK TIME
C          ( NOT CPU TIME ) .
C
C       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
C       ---------------------------------------------------------------
C       1-8     1X,I4,3X         ILINE           0
C       9-16    A8               TYPE            ='SUMMARY '
C       17-24   8X               NONE            NONE
C       25-32   8X               NONE            NONE
C       33-40   I8               LUNSUM          NONE
C       41-48   8X               NONE            NONE
C       49-56   8X               NONE            NONE
C       57-64   8X               NONE            NONE
C       65-72   8X               NONE            NONE
C       73-80   8X               NONE            NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -      DCASS5 COMMAND LINE NUMBER
C       TYPE    -      COMMAND NAME
C       LUNSUM  -      LOGICAL UNIT NUMBER TO LIST SUMMARY
```

```
C DCASS -   VAX VERSION 1.0A
C
C                        'TAPEFIND' COMMAND
C
C PURPOSE - TO FIND A SPECIFIED RAW DATA ENSEMBLE AND SET
C           THE NUMBER OF NON-ZERO DATA POINTS FOR THE ENSEMBLE.
C           TO BE USED WITH DCASS5 COMMANDS 'MOUNTGIN' AND 'TAPETYPE' .
C
C       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
C       ------------------------------------------------------------
C       1-8     1X,I4,3X        ILINE           0
C       9-16    A8              TYPE            ='TAPEFIND'
C       17-24   I8              NSEQF           1
C       25-32   8X              NONE            NONE
C       33-40   2A4             FILCMD          NONE
C       41-52   12X             NONE            NONE
C       53-56   A4              FKEY            'SHOT'
C       57-64   I8              ISTFIL          NONE
C       65-72   I8              NDATA           NDATAT
C       73-80   I8              IRWND           0
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C       NSEQF   -       NUMBER OF SEQUENTIAL FILES TO
C                       OPERATE ON
C                       ( FOR VERSION 1.0 A MUST EQUAL 1)
C       FILCMD  -       8 CHARECTER NAME TO BE USED IN DEFAULT
C                       FILE NAME CREATION FOR OUTPUT FILES.
C       FKEY    -       KEY ATTRIBUTE TO EVALUATE NEXT VARIABLE
C                       ISTFIL . MUST BE ONE OF THE FOLLOWING:
C                       'SHOT'  - BY SHOT NUMBER
C                       'FFID'  - BY FIELD FILE ID
C                       'SEQN'  - BY SEQUENTIAL FILE NUMBER
C       ISTFIL  -       KEY INDEX VALUE TO FIND FILE
C       NDATA   -       NUMBER OF NON-ZERO DATA POINTS IN THE
C                       FIELD FILE FOUND
C       IRWND   -       LOGICAL SWITCH IF SET TO ONE WILL FORCE A
C                       REWIND PRIOR TO FORWARD SEARCH
C
```

```
C DCASS -   VAX VERSION 1.0A                                          'TAPETYPE' COMMAND
C
C                         'TAPETYPE' COMMAND
C
C PURPOSE - TO DESCRIBE THE CONTENTS OF A RAW DATA TAPE AS
C            MIGHT BE MOUNTED BY DCASS5 COMMAND 'MOUNTGIN'
C
C       FIELD   FORMAT            VARIABLE          DEFAULT VALUE
C       ------------------------------------------------------------------
C       1-8     1X,I4,3X          ILINE             0
C       9-16    A8                TYPE              -'TAPETYPE"
C       17-24   8X                NONE              NONE
C       25-32   I8                NDATAT            NONE
C       33-40   I8                IIUSEC            NONE
C       41-48   I8                NDTPFR            48
C       49-56   I8                NATPFR            12
C       57-64   I8                SHOTS             NONE
C       65-72   I8                SHOTE             NONE
C       73-80   I8                ISTACK            NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBERS
C       TYPE    -       COMMAND NAME
C       NDATAT  -       NUMBER OF DATA POINTS PER TRACE
C                       (FOR VERSION 1.0 A RESTRICTED
C                        TO INTEGRAL POWERS OF TWO)
C       IIUSEC  -       NUMBER OF MICROSECONDS BETWEEN
C                       TRACE SAMPLES
C       NDTPFR  -       NUMBER OF DATA TEACES PER FIELD
C                       FILE
C       NATPFR  -       NUMBER OF AUX  TRACES PER FIELD
C                       FILE
C       SHOTS   -       STARTING SHOT NUMBER FOR TAPE
C       SHOTE   -       ENDING  SHOT NUMBER FOR TAPE
C       ISTACK  -       LOGICAL SWITCH SET TO 1 IF FILE
C                       IS STACKED DATA
C
C
```

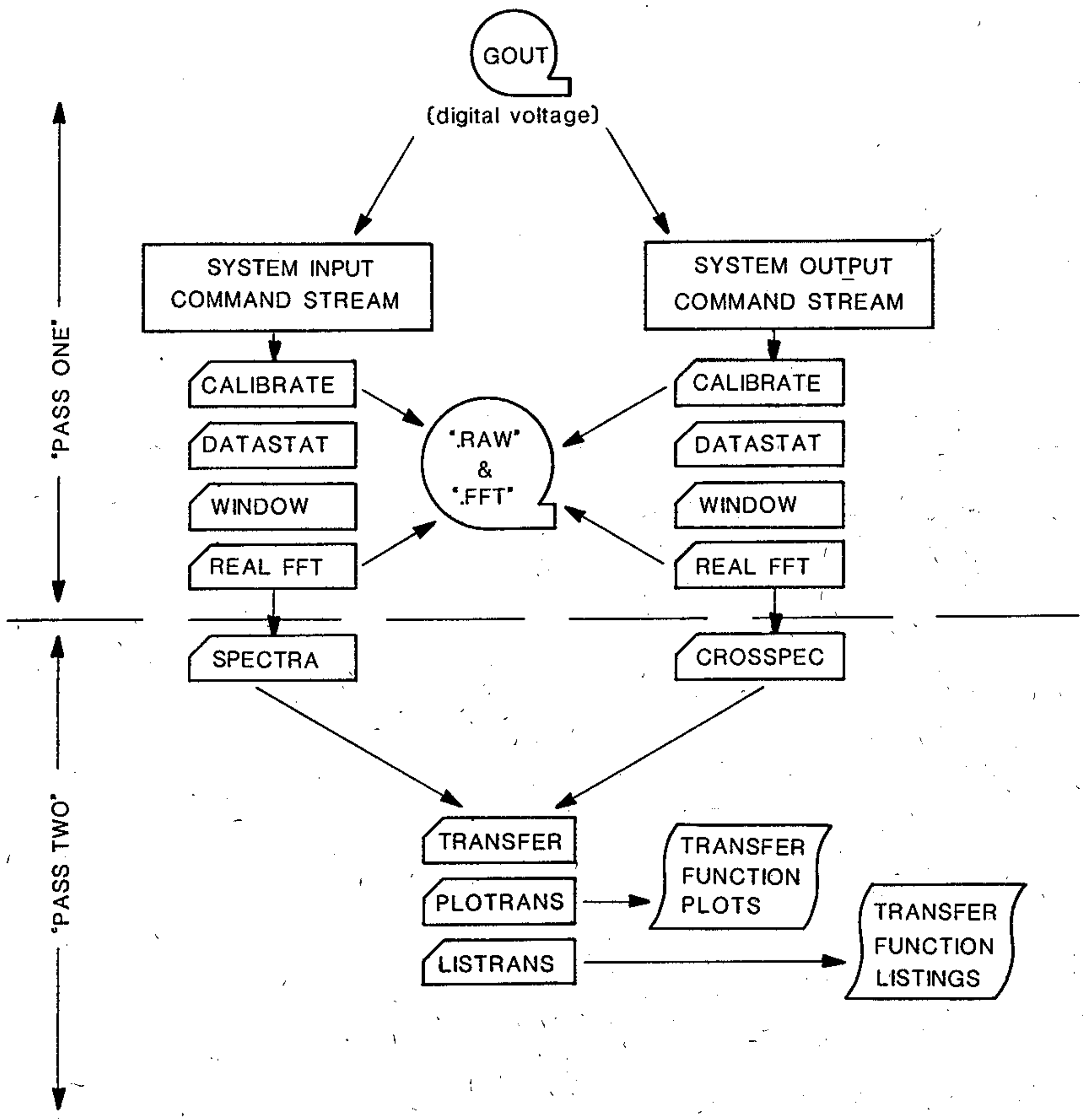
```
c DCASS -   VAX VERSION 1.0A
c
c                          'TRANSFER' COMMAND
c
c PURPOSE- TO COMPUTE THE MAGNITUDE AND PHASE OF THE TRANSFER
c          FUNCTION BETWEEN VECTOR 1 AND 2  ( MAG[H12] & ARG[H12] )
c          AND THE COHERENCE FUNCTION FROM G11 , G22 , G12 COMPUTED BY
c          COMMANDS 'SPECTRA' AND 'CROSSPEC' .
c
c       FIELD   FORMAT           VARIABLE        DEFAULT VALUE
c       ------------------------------------------------------------
c       1-8     1X,I4,3X         ILINE           0
c       9-16    A8               TYPE            ='TRANSFER'
c       17-24   8X               NONE            NONE
c       25-32   I8               ICONP           NONE
c       33-40   F8.1             PHILIM          NONE
c       41-48   I8               IZS             NONE
c       49-56   I8               LUNSTA          NONE
c       57-64   8X               NONE            NONE
c       65-72   8X               NONE            NONE
c       73-80   8X               NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE    -       DCASS5 COMMAND LINE NUMBER
c       TYPE     -       COMMAND NAME
c       ICONP    -       LOGICAL SWITCH TO INDICATE IF TO
c                        COMPUTE CONTINOUS PHASE OR NOT
c                        0 - NORMAL PHASE
c                        1 - CONTINUOUS PHASE
c       PHILIM   -       PHASE ABSOLUTE VALUE LIMIT TO BE USED
c                        IF ICONP = 1
c       IZS      -       VECTOR TO USE AS OUTPUT IN TRANSFER FUNCTION
c                        CALCULATIONS , INPUT IS VECTOR 1 .
c
```

```
C DCASS5  -  VAX VERSION 1.0 A                                    'USERVERS'-1
C
C                        'USERSVERS' COMMAND
C
C PURPOSE - TO SET UP FILE DEFAULT VALUES
C
C
C       FIELD   FORMAT          VARIABLE         DEFAULT VALUE
C       ------------------------------------------------------------------
C
C       1-8     1X,I4,3X        ILINE            NONE
C       9-16    A8              TYPE             'USERVERS'
C       17-24   8X              NONE             NONE
C       25-32   2A4             UIC1,UIC2        [.DCASS]
C       33-44   A8,A4           TSTTXT,TEXT      NONE
C       45-48   A4              VERS             BINARY ZERO
C       49-80   NONE            NONE             NONE
C
C       VARIABLE DESCRIPTION
C       --------------------
C
C       ILINE   -       DCASS5 COMMAND LINE NUMBER
C       TYPE    -       COMMAND NAME
C       UIC1
C       UIC2    -       8 CHARACTER DEFAULT SUB-DIRECTORY
C       TSTTXT
C       TEXT    -       FILE NAME AND FILE EXTENT FOR TEXT TO PRINT
C                       (1 CHARACTER OF TEXT MUST BE A PERIOD)
C       VERS    -       4 CHARACTER DEFAULT VERSION NUMBER
C
C
C
C
```

```
c DCASS5  -  VAX VERSION 1.0 A                               'WINDOW  '-1
c
c                         'WINDOW  ' COMMAND
c
c
c PURPOSE- TO WINDOW A SEGMENT OF DATA PRIOR TO CALCULATION OF
c          THE FFT . USED TO REDUCE 'LEAKAGE' . THE WINDOW
c          TYPE IS DETERMINED BY DCASS5 COMMAND 'FFTSIZE '.
c
c
c       FIELD   FORMAT          VARIABLE        DEFAULT VALUE
c       ------------------------------------------------------------
c
c       1-8     1X,I4,3X        ILINE           NONE
c       9-16    A8              TYPE            ='WINDOW  '
c       17-32   16X             NONE            NONE
c       33-40   I8              IZS             0
c       41-80   NONE            NONE            NONE
c
c       VARIABLE DESCRIPTION
c       --------------------
c
c       ILINE   -       DCASS5 COMMAND LINE NUMBER
c       TYPE    -       DCASS5 COMMAND = 'WINDOW  '
c       IZS     -       MEMORY VECTOR TO WINDOW
c
c                       TRACE HEADER
c
c
c
c
```

EXAMPLE ANALYSIS SHOT 2020 (EXCLUDING SOIL TRANFER FUNCTIONS)

COMMAND SEQUENCE FOR DCASS 5 ANALYSIS



```
VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS
VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS
VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS

                          CCCC   III  V   V  M   M  W   W   OOO
                         C        I   V   V  MM MM  W   W  O   O
                         C        I   V   V  M M M  W   W  O   O
                         C        I   V   V  M   M  W W W  O   O
                         C        I    V V   M   M  WW WW  O   O
                          CCCC   III    V    M   M  W   W   OOO

     SSSSSSSS  HH      HH   OOOOOO    TTTTTTTTTT    222222      000000     222222      000000
     SSSSSSSS  HH      HH   OOOOOO    TTTTTTTTTT    222222      000000     222222      000000
   SS          HH      HH OO      OO      TT      22      22  00      00 22      22  00      00
   SS          HH      HH OO      OO      TT      22      22  00      00 22      22  00      00
   SS          HH      HH OO      OO      TT              22  00    0000         22  00    0000
   SS          HH      HH OO      OO      TT              22  00    0000         22  00    0000
     SSSSSS    HHHHHHHHHH OO      OO      TT            22    00  00  00       22    00  00  00
     SSSSSS    HHHHHHHHHH OO      OO      TT            22    00  00  00       22    00  00  00
           SS  HH      HH OO      OO      TT          22      0000    00     22      0000    00
           SS  HH      HH OO      OO      TT          22      0000    00     22      0000    00
           SS  HH      HH OO      OO      TT        22        00      00   22        00      00    ....
           SS  HH      HH OO      OO      TT        22        00      00   22        00      00    ....
   SSSSSSSS    HH      HH   OOOOOO        TT      2222222222    000000   2222222222    000000      ....
   SSSSSSSS    HH      HH   OOOOOO        TT      2222222222    000000   2222222222    000000      ....

     CCCCCCCC    OOOOOO    MM      MM    ::::      11
     CCCCCCCC    OOOOOO    MM      MM    ::::      11
   CC          OO      OO  MMMM  MMMM    ::::    1111
   CC          OO      OO  MMMM  MMMM    ::::    1111
   CC          OO      OO  MM  MM  MM              11
   CC          OO      OO  MM  MM  MM              11
   CC          OO      OO  MM      MM    ::::      11
   CC          OO      OO  MM      MM    ::::      11
   CC          OO      OO  MM      MM    ::::      11
   CC          OO      OO  MM      MM    ::::      11
   CC          OO      OO  MM      MM      ::      11
   CC          OO      OO  MM      MM      ::      11
     CCCCCCCC    OOOOOO    MM      MM    ::      111111
     CCCCCCCC    OOOOOO    MM      MM    ::      111111

                          CCCC   III  V   V  M   M  W   W   OOO
                         C        I   V   V  MM MM  W   W  O   O
                         C        I   V   V  M M M  W   W  O   O
                         C        I   V   V  M   M  W   W  O   O
                         C        I   V   V  M   M  W W W  O   O
                         C        I    V V   M   M  WW WW  O   O
                          CCCC   III    V    M   M  W   W   OOO

VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS
VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS
VAX/VMS  CIVMWO      SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:14    _DRA1:[CIVMWO]SHOT2020.COM;1   VAX/VMS
```

```
$ SET DEFAULT [CIVMWO]
$ SHOW SYSTEM
$ MCR PIP DRA1:/FREE
$ SHOW WORKING_SET
$ RUN/NODEBUG [.DCASS5]DCASS5
  900   OPENCOMD  FILE  [.DCASS]SHOT2020.CMD        TO UNIT        12
$ SHOW STATUS
$ DIR/FULL [.DCASS]SHOT2020.RAW,[.DCASS]SHOT2020.FFT,-
  [.DCASS]SHOT2020.STA,[.DCASS]SHOT2020.ECO
$ PR/HEADER SHOT2020.COM
$ PR/HEADER [.DCASS]SHOT2020.CMD
$ PR/HEADER [.DCASS]STATSDMP.ANL
$ PR/HEADER [.DCASS]SHOT2020.STA
$ PR/HEADER [.DCASS]SHOT2020.ECO
$ RENAME [.DCASS]SHOT2020.RAW [.DAT5B]SHOT2020.RAW
$ COPY [.DCASS]SHOT2020.FFT [.DAT5B]SHOT2020.FFT
$ RENAME [.DCASS]SHOT2020.STA [.DAT5B]SHOT2020.STA
$ RENAME [.DCASS]SHOT2020.ECO [.DAT5B]SHOT2020.ECO
$ SHOW TIME
$ SHOW STATUS
$ SHOW SYSTEM
$ GETTAPE/OUTPUT/DENSITY=1600/LABEL=REDOOD  TAP1
$ INITIALIZE/DENSITY=1600 TAP1: REDOOD
$ MOUNT/BLOCKSIZE=4096/DENSITY=1600  TAP1: REDOOD
$ DIRECTORY/FULL TAP1:
$ COPY/LOG [CIVMWO.DAT5B]SHOT2020.* TAP1:SHOT2020.*;23
$ DISMOUNT TAP1:
$ DEALLOCATE TAP1:
$ EXIT
```

VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:12 LPA0: 10-DEC-1982 13:14 _DRA1:[DCASS]SHOT2020.CMD;2 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:12 LPA0: 10-DEC-1982 13:14 _DRA1:[DCASS]SHOT2020.CMD;2 VAX/VMS


```
                 CCCC   III   V   V  M   M  W   W   OOO
                C        I    V   V  MM MM  W   W  O   O
                C        I    V   V  M M M  W   W  O   O
                C        I    V   V  M   M  W   W  O   O
                C        I    V   V  M   M  W W W  O   O
                C        I     V V   M   M  WW WW  O   O
                 CCCC   III     V    M   M  W   W   OOO

  SSSSSSSS  HH      HH    OOOOOO    TTTTTTTTTT    222222      000000      222222      000000
  SSSSSSSS  HH      HH    OOOOOO    TTTTTTTTTT    222222      000000      222222      000000
SS          HH      HH  OO      OO      TT      22      22  00      00  22      22  00      00
SS          HH      HH  OO      OO      TT      22      22  00      00  22      22  00      00
SS          HH      HH  OO      OO      TT              22  00    0000          22  00    0000
SS          HH      HH  OO      OO      TT              22  00    0000          22  00    0000
  SSSSSS    HHHHHHHHHH  OO      OO      TT            22    00  00  00        22    00  00  00
  SSSSSS    HHHHHHHHHH  OO      OO      TT            22    00  00  00        22    00  00  00
        SS  HH      HH  OO      OO      TT          22      0000    00      22      0000    00
        SS  HH      HH  OO      OO      TT          22      0000    00      22      0000    00
        SS  HH      HH  OO      OO      TT        22        00      00    22        00      00    ....
        SS  HH      HH  OO      OO      TT        22        00      00    22        00      00    ....
SSSSSSSS    HH      HH    OOOOOO        TT      2222222222    000000    2222222222    000000      ....
SSSSSSSS    HH      HH    OOOOOO        TT      2222222222    000000    2222222222    000000      ....

  CCCCCCCC  MM      MM  DDDDDDDD      ::::        222222
  CCCCCCCC  MM      MM  DDDDDDDD      ::::        222222
CC          MMMM  MMMM  DD      DD    ::::      22      22
CC          MMMM  MMMM  DD      DD    ::::      22      22
CC          MM  MM  MM  DD      DD                      22
CC          MM  MM  MM  DD      DD                      22
CC          MM      MM  DD      DD    ::::            22
CC          MM      MM  DD      DD    ::::            22
CC          MM      MM  DD      DD    ::::          22
CC          MM      MM  DD      DD    ::::          22
CC          MM      MM  DD      DD      ::        22
CC          MM      MM  DD      DD      ::        22
  CCCCCCCC  MM      MM  DDDDDDDD        ::      2222222222
  CCCCCCCC  MM      MM  DDDDDDDD        ::      2222222222

                 CCCC   III   V   V  M   M  W   W   OOO
                C        I    V   V  MM MM  W   W  O   O
                C        I    V   V  M M M  W   W  O   O
                C        I    V   V  M   M  W   W  O   O
                C        I    V   V  M   M  W W W  O   O
                C        I     V V   M   M  WW WW  O   O
                 CCCC   III     V    M   M  W   W   OOO
```


VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:12 LPA0: 10-DEC-1982 13:14 _DRA1:[DCASS]SHOT2020.CMD;2 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:12 LPA0: 10-DEC-1982 13:14 _DRA1:[DCASS]SHOT2020.CMD;2 VAX/VMS

```
 100   1000  OPENECHO   FILE [.DCASS]SHOT2020.ECO      TO UNIT       8
 150   1004  RUNTITLE   FFID=622  50 - 2 HZ SWEEP AT 1.6 KIP  8/15/81 16:17
 200   1005  USERVERS        [.DCASS]SHOT2020.TXT
 300   1006  SETUPDATA  FILE [.DCASS]SETUPDAT.SV5      TO UNIT       1
 400   1007  GEOMDATA   FILE [.DCASS]SNGLGEO1.DAT      TO UNIT       1
 500   1010  MOUNTGIN   REEL CIV971    DENSITY     1600 FORMAT GINO      SNGLVERT
 600   1020  TAPETYPE          8192     4000     48       12     2001     2022      0
 700   1030  TAPEFIND      1  NAME  SHOT2020 KEY ON THE SHOT     2020     7500      0
 800   1040  FFTSIZE            13        1        1      125       2  10.0000      2
 900   1045  OPENSEQOUT FILE [.DCASS]SHOT2020.RAW;4    ON UNIT       1  VECTOR      1
1000   2020  OPENSEQOUT FILE [.DCASS]SHOT2020.FFT;4    TO UNIT       2  VECTOR      1
1100   2025  OPENLIST   FILE [.DCASS]SHOT2020.STA;4    TO UNIT      10
1200   1050  ANALYSIS   FILE [.DCASS]STATSUMP.ANL      ON UNIT       7
1300   3100  CLOSE    CIV971
1400   2360  ENDFILE SEQOUT        1
1500   2370  CLOSE   SEQOUT        1
1600   2380  ENDFILE SEQOUT        2
1700   2390  CLOSE   SEQOUT        2
1800   2392  ENDFILE SEQOUT       10
1900   2394  CLOSE   SEQOUT       10
2000   3150  SUMMARY COMMANDS TO UNIT       8
2100   3200  ENDFILE SEQOUT        8
2200   3300  CLOSE   SEQOUT        8
2300   3400  EXIT
```

```
VAX/VMS   CIVMWO        STATSDMP 10-DEC-1982 13:12     LPA0: 10-DEC-1982 13:15     _DRA1:[DCASS]STATSDMP.ANL;5   VAX/VMS
VAX/VMS   CIVMWO        STATSDMP 10-DEC-1982 13:12     LPA0: 10-DEC-1982 13:15     _DRA1:[DCASS]STATSDMP.ANL;5   VAX/VMS
VAX/VMS   CIVMWO        STATSDMP 10-DEC-1982 13:12     LPA0: 10-DEC-1982 13:15     _DRA1:[DCASS]STATSDMP.ANL;5   VAX/VMS

                    CCCC   III   V     V  M     M  W     W   OOO
                   C        I    V     V  MM   MM  W     W  O   O
                   C        I    V     V  M M M M  W     W  O   O
                   C        I    V     V  M  M  M  W     W  O   O
                   C        I    V     V  M     M  W  W  W  O   O
                   C        I     V   V   M     M  WW   WW  O   O
                    CCCC   III      V     M     M  W     W   OOO

    SSSSSSSS  TTTTTTTTTT    AAAAAA    TTTTTTTTTT    SSSSSSSS  DDDDDDDD    MM       MM  PPPPPPPP
    SSSSSSSS  TTTTTTTTTT    AAAAAA    TTTTTTTTTT    SSSSSSSS  DDDDDDDD    MM       MM  PPPPPPPP
  SS              TT      AA      AA      TT      SS          DD      DD  MMMM   MMMM  PP      PP
  SS              TT      AA      AA      TT      SS          DD      DD  MMMM   MMMM  PP      PP
  SS              TT      AA      AA      TT      SS          DD      DD  MM  MM   MM  PP      PP
  SS              TT      AA      AA      TT      SS          DD      DD  MM  MM   MM  PP      PP
    SSSSSS        TT      AA      AA      TT        SSSSSS    DD      DD  MM       MM  PPPPPPPP
    SSSSSS        TT      AA      AA      TT        SSSSSS    DD      DD  MM       MM  PPPPPPPP
          SS      TT      AAAAAAAAAA      TT              SS  DD      DD  MM       MM  PP
          SS      TT      AAAAAAAAAA      TT              SS  DD      DD  MM       MM  PP
          SS      TT      AA      AA      TT              SS  DD      DD  MM       MM  PP          ::::
          SS      TT      AA      AA      TT              SS  DD      DD  MM       MM  PP          ::::
  SSSSSSSS        TT      AA      AA      TT      SSSSSSSS    DDDDDDDD    MM       MM  PP          ::::
  SSSSSSSS        TT      AA      AA      TT      SSSSSSSS    DDDDDDDD    MM       MM  PP          ::::

    AAAAAA    NN      NN  LL                  ::::  5555555555
    AAAAAA    NN      NN  LL                  ::::  5555555555
  AA      AA  NN      NN  LL                  ::::  55
  AA      AA  NN      NN  LL                  ::::  55
  AA      AA  NNNN    NN  LL                        555555
  AA      AA  NNNN    NN  LL                        555555
  AA      AA  NN  NN  NN  LL                  ::::        55
  AA      AA  NN  NN  NN  LL                  ::::        55
  AAAAAAAAAA  NN    NNNN  LL                  ::::          55
  AAAAAAAAAA  NN    NNNN  LL                  ::::          55
  AA      AA  NN      NN  LL                    ::  55      55
  AA      AA  NN      NN  LL                    ::  55      55
  AA      AA  NN      NN  LLLLLLLLLL          ;;      555555
  AA      AA  NN      NN  LLLLLLLLLL          ;;      555555

                    CCCC   III   V     V  M     M  W     W   OOO
                   C        I    V     V  MM   MM  W     W  O   O
                   C        I    V     V  M M M M  W     W  O   O
                   C        I    V     V  M  M  M  W     W  O   O
                   C        I    V     V  M     M  W  W  W  O   O
                   C        I     V   V   M     M  WW   WW  O   O
                    CCCC   III      V     M     M  W     W   OOO

VAX/VMS   CIVMWO        STATSDMP 10-DEC-1982 13:12     LPA0: 10-DEC-1982 13:15     _DRA1:[DCASS]STATSDMP.ANL;5   VAX/VMS
VAX/VMS   CIVMWO        STATSDMP 10-DEC-1982 13:12     LPA0: 10-DEC-1982 13:15     _DRA1:[DCASS]STATSDMP.ANL;5   VAX/VMS
```

```
 200  2000  LISTANALYSIS     TO UNIT       8
 500  2042  LOOP        FOR        56       SEQCHAN
 600  2049  ECHO OFF
 700  2049  LOADTRACE INTO  VECTOR         1
 800  2050  CALIBRATE       VECTOR         1
 900  2060  DATASTATS   FOR VECTOR         1  REMOVE        1
1000  2080  DUMPCHANNEL  IN VECTOR         1 TO UNIT        1
1100  2090  WINDOW  DATA IN VECTOR         1
1200  2100  REALFFT DATA IN VECTOR         1
1300  2120  SPECTRA OF DATA VECTOR         1
1400  2110  DUMPCHANNEL  IN VECTOR         1 TO UNIT        2
1500  2140  LISTSTATS   FOR VECTOR         1 TO UNIT       10
1600  2143  ECHO ON
1700  2150  ENDLOOP       ON SEQCHAN
1800  2249  CHANSKIP                  1
1900  2280  DUMPCHANNEL  IN VECTOR         1 TO UNIT        1
2000  2110  DUMPCHANNEL  IN VECTOR         1 TO UNIT        2
2100  2243  LOOP        FOR         3       SEQCHAN
2200  2245  ECHO OFF
2300  2249  LOADTRACE INTO  VECTOR         1
2400  2250  CALIBRATE       VECTOR         1
2500  2260  DATASTATS   FOR VECTOR         1  REMOVE        1
2600  2280  DUMPCHANNEL  IN VECTOR         1 TO UNIT        1
2700  2290  WINDOW  DATA IN VECTOR         1
2800  2300  REALFFT DATA IN VECTOR         1
2900  2320  SPECTRA OF DATA VECTOR         1
3000  2510  DUMPCHANNEL  IN VECTOR         1 TO UNIT        2
3100  2340  LISTSTATS   FOR VECTOR         1 TO UNIT       10
3200  2343  ECHO ON
3300  2350  ENDLOOP       ON SEQCHAN
3400  2120  ENDANALYSIS  TO GENERATE RAW & FFT FILE AND STATS
```

```
VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS
VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS
VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS

            CCCC   III   V   V  M   M  W   W   OOO
           C        I    V   V  MM MM  W   W  O   O
           C        I    V   V  M M M  W   W  O   O
           C        I    V   V  M   M  W   W  O   O
           C        I    V   V  M   M  W W W  O   O
           C        I     V V   M   M  WW WW  O   O
            CCCC   III     V    M   M  W   W   OOO

  SSSSSSSS  HH      HH   000000   TTTTTTTTTT   222222    000000    222222    000000
  SSSSSSSS  HH      HH   000000   TTTTTTTTTT   222222    000000    222222    000000
SS          HH      HH  00    00      TT     22      22 00    00 22      22 00    00
SS          HH      HH  00    00      TT     22      22 00    00 22      22 00    00
SS          HH      HH  00    00      TT             22 00  0000         22 00  0000
SS          HH      HH  00    00      TT             22 00  0000         22 00  0000
  SSSSSS    HHHHHHHHHH  00    00      TT           22   00 00 00       22   00 00 00
  SSSSSS    HHHHHHHHHH  00    00      TT           22   00 00 00       22   00 00 00
        SS  HH      HH  00    00      TT         22     0000  00     22     0000  00
        SS  HH      HH  00    00      TT         22     0000  00     22     0000  00
        SS  HH      HH  00    00      TT       22       00    00   22       00    00    ....
        SS  HH      HH  00    00      TT       22       00    00   22       00    00    ....
SSSSSSSS    HH      HH   000000       TT     2222222222  000000  2222222222  000000     ....
SSSSSSSS    HH      HH   000000       TT     2222222222  000000  2222222222  000000     ....

  SSSSSSSS  TTTTTTTTTT    AAAAAA       ;;;;    44    44
  SSSSSSSS  TTTTTTTTTT    AAAAAA       ;;;;    44    44
SS              TT      AA      AA     ;;;;    44    44
SS              TT      AA      AA     ;;;;    44    44
SS              TT      AA      AA             44    44
SS              TT      AA      AA             44    44
  SSSSSS        TT      AA      AA     ;;;;    4444444444
  SSSSSS        TT      AA      AA     ;;;;    4444444444
        SS      TT      AAAAAAAAAA     ;;;;          44
        SS      TT      AAAAAAAAAA     ;;;;          44
        SS      TT      AA      AA       ;;          44
        SS      TT      AA      AA       ;;          44
SSSSSSSS        TT      AA      AA     ;;            44
SSSSSSSS        TT      AA      AA     ;;            44

            CCCC   III   V   V  M   M  W   W   OOO
           C        I    V   V  MM MM  W   W  O   O
           C        I    V   V  M M M  W   W  O   O
           C        I    V   V  M   M  W   W  O   O
           C        I    V   V  M   M  W W W  O   O
           C        I     V V   M   M  WW WW  O   O
            CCCC   III     V    M   M  W   W   OOO

VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS
VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS
VAX/VMS  CIVMWO    SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DCASS]SHOT2020.STA;4  VAX/VMS
```

SET TITLE..................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS4 USER NAME................GLM
SET - .SVS COMMENTS............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE FFID=522 50 - 2 HZ SWEEP AT 1.6 KIP 3/15/81 15:17
ANALYSIS COMMAND TITLE---------- 2420 ENDANALYSIS TO GENERATE RAW & FFT FILE AND STATS
SHOT = 2020 SEQNO = 1 CHAN = 49

INPUT DERIVED DATA

SEGMENT	CHANNEL	MINIMUM DATA POINT	MAXIMUM DATA POINT	SLOPE VALUE	MEAN	MEAN SQUARED VALUE	AVE ABS MAX	RMS	VARIANCE	SPECTRAL DENSITY DERIVED VARIANCE
0	49	-1.2375E+04	1.2325E+04	-1.7034E-03	-3.6116E+00	2.9569E+07	1.2350E+04	5.4378E+03	2.9569E+07	3.0649E+07
0	50	-9.5611E-01	9.3813E-01	-7.8137E-08	1.7724E-02	3.6101E+03	9.5212E-01	6.0084E+01	3.6101E+03	9.6493E-02
0	51	-1.0743E-01	1.1660E-01	6.6193E-08	2.5282E-02	4.4236E-01	1.1201E-01	6.6510E-01	4.4172E-01	8.9023E-04
0	52	-2.4683E-01	2.4603E-01	-1.1349E-07	1.5339E-02	5.0662E-03	2.4643E-01	7.7886E-02	5.8309E-03	5.9751E-03
0	53	-2.5716E+00	2.4840E+00	-4.6795E-08	2.5131E-02	7.4294E-01	2.5278E+00	8.6194E-01	7.4230E-01	7.8268E-01
0	54	-2.1810E-01	2.2996E-01	2.7177E-08	1.6475E-02	6.6923E-03	2.2403E-01	8.1806E-02	6.4209E-03	6.3330E-03
0	55	-3.3408E-01	3.6040E-01	-2.9173E-07	4.2847E-02	1.4251E-02	3.4724E-01	1.1938E-01	1.2415E-02	1.3139E-02
0	56	-5.3022E+00	5.8174E+00	-3.5982E-07	4.4669E-02	3.5553E+00	5.8098E+00	1.8856E+00	3.5533E+00	3.7665E+00
0	57	-4.3800E-01	5.1785E-01	-3.6698E-07	4.2222E-02	2.3011E-02	4.7793E-01	1.5169E-01	2.1228E-02	1.9571E-02
0	58	-4.4304E-01	4.9788E-01	-4.3625E-07	3.9791E-02	2.2040E-02	4.7046E-01	1.4846E-01	2.0456E-02	1.9194E-02
0	59	-6.1042E+03	6.1990E+03	3.4338E-04	-1.4040E+01	7.4950E+06	6.1516E+03	2.7377E+03	7.4948E+06	7.7515E+06
0	60	-2.6438E+01	2.0265E+01	1.5114E-04	-7.1418E+01	6.0934E+03	2.3352E+01	7.8060E+01	9.9234E+02	7.8424E+01
0	1	-1.2974E+04	1.2802E+04	-1.7308E-03	-7.0445E+00	2.3367E+07	1.2888E+04	5.4191E+03	2.9367E+07	3.0561E+07
0	2	-2.9952E+02	2.7253E+02	3.6549E-06	1.6677E+00	8.0745E+03	2.8603E+02	8.9858E+01	8.0718E+03	4.1451E+03
0	3	-5.9567E+03	5.0924E+03	4.5296E-04	-1.8394E+00	3.3535E+06	5.5245E+03	1.8313E+03	3.3535E+06	3.4859E+06
0	4	-9.6047E+01	9.4541E+01	-4.5202E-06	4.3439E-01	9.1696E+02	9.5294E+01	3.0281E+01	9.1677E+02	5.3096E+02
0	5	-5.7268E+03	4.9086E+03	4.4353E-04	-1.6977E+00	3.2537E+06	5.3177E+03	1.8038E+03	3.2537E+06	3.3791E+06
0	6	-1.7364E+01	1.6948E+01	-8.7242E-07	3.6179E-03	4.3604E+02	1.7156E+01	2.0882E+01	4.3604E+02	4.0874E+01
0	7	-1.5966E+03	1.2259E+03	1.0520E-04	-6.3653E-01	2.2919E+05	1.4118E+03	4.7874E+02	2.2919E+05	2.3807E+05
0	8	-3.2078E+03	2.7766E+03	1.3806E-04	-8.7261E-01	1.0727E+06	2.9922E+03	1.0357E+03	1.0727E+06	1.1154E+06
0	9	-2.1979E+03	1.8902E+03	1.4104E-04	-7.5292E-01	5.0191E+05	2.0440E+03	7.0845E+02	5.0190E+05	5.2180E+05
0	10	-5.7985E+02	4.9875E+02	1.9800E-05	-3.2984E-01	2.3538E+04	5.3931E+02	1.5342E+02	2.3538E+04	2.4391E+04
0	11	-2.4418E+02	2.3303E+02	1.5493E-05	-2.9377E-01	3.1933E+03	2.3864E+02	5.6509E+01	3.1932E+03	3.3701E+03
0	12	-1.5203E+00	1.4369E+00	-6.0532E-08	6.7791E-04	4.7501E-01	1.4786E+00	6.8921E-01	4.7500E-01	8.9525E-02
0	13	-1.1253E+02	1.1348E+02	6.3211E-06	-1.5506E-01	1.5259E+03	1.1300E+02	3.9063E+01	1.5259E+03	1.5382E+03
0	14	-1.0625E+02	1.1273E+02	1.0505E-05	-5.3338E-01	1.0761E+03	1.0952E+02	3.2804E+01	1.0757E+03	1.1198E+03
0	15	-2.1266E+02	1.9072E+02	5.2015E-06	-7.4240E-02	3.9964E+03	2.0179E+02	6.3217E+01	3.9964E+03	3.7772E+03
0	16	-9.5296E+01	9.4353E+01	2.2125E-06	1.1566E-01	3.5759E+02	9.5324E+01	1.8910E+01	3.5757E+02	3.7578E+02
0	17	-1.5263E+02	1.5890E+02	-2.8755E-06	6.8199E-02	1.3182E+03	1.5577E+02	3.6308E+01	1.3182E+03	1.3820E+03
0	18	-1.3969E+00	1.7472E+00	-3.9612E-08	2.3705E-04	3.4268E-01	1.8220E+00	5.8539E-01	3.4268E-01	1.9292E-01
0	19	-3.3578E+02	3.5053E+02	3.1317E-05	-5.2223E-01	1.5546E+04	3.7323E+02	1.2468E+02	1.5546E+04	1.6241E+04
0	20	-2.7703E+02	1.9955E+02	9.3260E-06	-2.8394E-01	3.1420E+03	2.3829E+02	5.6054E+01	3.1419E+03	3.3090E+03
0	21	-1.1941E+02	1.2240E+02	1.8498E-05	-1.8873E-01	1.5780E+03	1.2091E+02	3.9724E+01	1.5780E+03	1.6433E+03
0	22	-2.4029E-01	2.4050E-01	3.7205E-09	-8.2909E-05	1.9787E-01	2.4039E-01	4.4482E-01	1.9787E-01	5.5492E-03
0	23	-4.2188E+00	4.1883E+00	1.7762E-07	-9.9675E-04	2.0011E+00	4.2036E+00	1.4146E+00	2.0011E+00	2.1106E+00
0	24	-5.6043E-03	5.7987E-03	5.0000E-10	-1.2528E-04	2.4595E-04	5.7015E-03	1.5683E-02	2.4593E-04	1.6725E-05
0	25	-4.5468E+00	4.5950E+00	-5.2164E-07	2.5920E-03	2.3099E+00	4.5709E+00	1.5198E+00	2.3099E+00	2.4489E+00
0	26	-3.3322E+00	3.3835E+00	-2.9487E-07	1.3642E-03	1.3696E+00	3.6078E+00	1.1699E+00	1.3686E+00	1.4479E+00
0	27	-2.2200E-01	2.5983E-01	2.0542E-08	-8.5923E-05	7.1425E-03	2.4092E-01	8.4514E-02	7.1426E-03	7.3257E-03

0	28	-1.2110E+00	1.2650E+00	1.2279E-07	-7.7731E-04	2.5542E-01	1.2380E+03	5.1519E-01	2.5542E-01	2.7938E-01
0	29	-6.3942E-01	6.2748E-01	3.1374E-08	-2.8478E-04	4.0184E-02	6.3345E-01	2.0046E-01	4.0184E-02	4.1449E-02
0	30	-2.0193E-01	2.2408E-01	8.6359E-09	-1.2951E-04	3.9476E-03	2.1301E-01	6.2830E-02	3.9476E-03	4.1646E-03
0	31	-3.3942E-01	3.8838E-01	0.7220E-09	-9.7329E-05	1.1735E-02	3.8840E-01	1.0833E-01	1.1735E-02	1.2302E-02
0	32	-3.3711E-01	3.5034E-01	-3.6436E-08	6.7685E-05	9.6477E-03	3.4397E-01	9.2993E-02	9.6476E-03	8.8677E-03
0	33	-5.2905E-02	5.3707E-02	-2.8803E-09	7.5214E-05	2.8500E-04	5.3306E-02	1.6882E-02	2.8500E-04	2.9327E-04
0	34	-2.1953E+00	2.3935E+00	-4.5645E-08	-1.6557E-04	5.8690E-01	2.2974E+03	7.6609E-01	5.8690E-01	6.1533E-01
0	35	-5.2837E-02	5.2091E-02	2.7349E-09	-3.0821E-05	3.4804E-04	5.2464E-02	1.8656E-02	3.4803E-04	2.8548E-04
0	36	-6.3698E-01	6.2614E-01	4.5813E-08	-2.3208E-04	4.2350E-02	6.3156E-01	2.0579E-01	4.2350E-02	4.4580E-02
0	37	-1.4218E+00	1.4325E+00	-2.2665E-07	1.5542E-03	3.0779E-01	1.4272E+00	5.5479E-01	3.0779E-01	3.2020E-01
0	38	-7.8988E-02	8.5167E-02	-4.5642E-09	2.8965E-05	3.2396E-04	8.2077E-02	1.7999E-02	3.2396E-04	3.0384E-04
0	39	-7.3756E-01	7.3366E-01	6.5402E-08	-3.9271E-04	3.8108E-02	7.3561E-01	1.9521E-01	3.8108E-02	4.0227E-02
0	40	-2.3779E-01	2.3794E-01	2.5952E-08	-2.4670E-04	5.2737E-03	2.3786E-01	7.2621E-02	5.2737E-03	5.4597E-03
0	41	-1.5286E-01	1.5215E-01	1.2870E-08	-1.7944E-04	2.2325E-03	1.5250E-01	4.7250E-02	2.2325E-03	2.3504E-03
0	42	-3.4182E+04	3.3352E+04	3.2010E-03	-1.8090E+01	1.4516E+09	3.3767E+04	1.2048E+04	1.4516E+08	1.5401E+08
0	43	-2.6325E+05	2.2720E+05	-1.2310E-01	3.6339E+01	1.5582E+09	2.4523E+05	3.9474E+04	1.5582E+09	1.5913E+09
0	44	-2.2534E+04	2.2016E+04	1.4706E-03	-7.4169E+00	5.7221E+07	2.2275E+04	7.5645E+03	5.7221E+07	6.0317E+07
0	46	-1.7826E+04	1.7099E+04	1.5993E-03	-1.5035E+01	1.8855E+07	1.7463E+04	4.3423E+03	1.8855E+07	1.9946E+07
0	47	-7.2286E+03	6.8447E+03	-1.8107E-04	-4.8266E+00	7.9382E+06	7.0356E+03	2.9173E+03	7.9381E+06	7.4274E+06
0	48	-3.2353E+03	4.2107E+03	-6.0676E-04	3.4085E+00	1.4366E+06	3.7230E+03	1.1986E+03	1.4366E+06	1.3215E+06

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VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS
VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS
VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS

       CCCC  III  V   V  M   M  W   W  OOO
      C       I   V   V  MM MM  W   W O   O
      C       I   V   V  M M M  W   W O   O
      C       I   V   V  M   M  W   W O   O
      C       I   V   V  M   M  W W W O   O
      C       I    V V   M   M  WW WW O   O
       CCCC  III    V    M   M  W   W  OOO

  SSSSSSSS  HH      HH   000000   TTTTTTTTTT   222222    000000    222222    000000
  SSSSSSSS  HH      HH   000000   TTTTTTTTTT   222222    000000    222222    000000
SS          HH      HH 00      00     TT     22      22 00      00 22      22 00      00
SS          HH      HH 00      00     TT     22      22 00      00 22      22 00      00
SS          HH      HH 00      00     TT             22 00    0000         22 00    0000
SS          HH      HH 00      00     TT             22 00    0000         22 00    0000
  SSSSSS    HHHHHHHHHH 00      00     TT           22   00  00  00       22   00  00  00
  SSSSSS    HHHHHHHHHH 00      00     TT           22   00  00  00       22   00  00  00
        SS  HH      HH 00      00     TT         22     0000    00     22     0000    00
        SS  HH      HH 00      00     TT         22     0000    00     22     0000    00
        SS  HH      HH 00      00     TT       22       00      00   22       00      00   ....
        SS  HH      HH 00      00     TT       22       00      00   22       00      00   ....
SSSSSSSS    HH      HH   000000       TT     2222222222  000000    2222222222  000000      ....
SSSSSSSS    HH      HH   000000       TT     2222222222  000000    2222222222  000000      ....

  EEEEEEEEEE   CCCCCCCC   000000      ::::      11
  EEEEEEEEEE   CCCCCCCC   000000      ::::      11
  EE         CC         00      00    ::::    1111
  EE         CC         00      00    ::::    1111
  EE         CC         00      00              11
  EE         CC         00      00              11
  EEEEEEEE   CC         00      00    ::::      11
  EEEEEEEE   CC         00      00    ::::      11
  EE         CC         00      00    ::::      11
  EE         CC         00      00    ::::      11
  EE         CC         00      00      ::      11
  EE         CC         00      00      ::      11
  EEEEEEEEEE   CCCCCCCC   000000      ::      111111
  EEEEEEEEEE   CCCCCCCC   000000      ::      111111

       CCCC  III  V   V  M   M  W   W  OOO
      C       I   V   V  MM MM  W   W O   O
      C       I   V   V  M M M  W   W O   O
      C       I   V   V  M   M  W   W O   O
      C       I   V   V  M   M  W W W O   O
      C       I    V V   M   M  WW WW O   O
       CCCC  III    V    M   M  W   W  OOO

VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS
VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS
VAX/VMS  CIVMWO     SHOT2020 10-DEC-1982 13:12   LPA0: 10-DEC-1982 13:15   _DRA1:[DOCASS]SHOT2020.EC;1  VAX/VMS
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DCASS5
DATA COLLECTION AND ANALYSIS SOFTWARE SYSTEM 5
DEC VAX VERSION A ; NOVEMBER 6, 1981 ; GORDON L. MUSTER II

[ ! ] REVISED BY GLM ON 12/ 5/81  -  FIX SCALING OF TRANSFER

[ ! ] REVISED BY GLM ON  3/10/82  -  FIX LOSS OF GOUT TRACE
      HEADER IN LOADTRAC COMMAND, CHANGED MOVEDATA TO
      MOVEVECT AND FIX COVARIANCE , SKIPCHAN & IF COMMANDS
[ ! ] REVISED BY GLM ON  9 4/82 - FIX LISTRAN AND
       ADDED GEOMLINE TO IF COMMAND AND MADE F(VECTOR #)
       AND ADDED GOSUB,RETURN AND COMMENT COMMANDS

#[DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5]

LOG OF CARD IMAGES IN COMMAND THREAD

------------------------------------------------------------------------------------------------------
LINE#/CARD=    2/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:50:20 ON 12/10/82/
 1000   OPENECHO   FILE [.DCASS]SHOT2020.ECO      TO UNIT       8
------------------------------------------------------------------------------------------------------
LINE#/CARD=    3/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:50:20 ON 12/10/82/
 1004   RUNTITLE   FFID=522  50 - 2 HZ SWEEP AT 1.6 KIP  8/15/81 16:17
------------------------------------------------------------------------------------------------------
LINE#/CARD=    4/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:50:20 ON 12/10/82/
 1005   USERVERS         [.DCASS]SHOT2020.TXT
SETUP DATA
CAL,CMD,SET,TITLE                                           USER
                                                            544
344        12A4
VERTSNGL.SV5  VERTICAL SINGLE PILE TEST USING WES VIBRATOR  GLM
COMENT - (20A4)
               INERTIA MASSES ATTACHED TO VIBRATOR
(SCHNAM(I),I=  1, 16 ) - (16(A4,1X))
INF4 AP21 AP20 AP19 AP1V VP8V AP2V AP3V AP4V AP7V AP1H VP8T AP2H AP3H AP4H AP7H
(SCHNAM(I),I= 17, 32 ) - (16(A4,1X))
AP1T VP8H AP2T AP3T AP4T V16V V10V V11V VP6V VP9V V14V V13V V15V V10H V11H VP6T
(SCHNAM(I),I= 33, 48 ) - (16(A4,1X))
VP9T V14H V13H V15H VP6H VP9H V14T V13T V15T P1F0 P1F1 P1F2 P1F3 P1F4 P1F7 P1F9
(SCHNAM(I),I= 49, 64 ) - (16(A4,1X))
AIF4 VP2V VP2T VP2H VP3V VP3T VP3H V17V VP5T VP5H AIF5 AIF6
DCASS4 CALIBRATION DATA FOR
VERTSNGL.SV5  VERTICAL SINGLE PILE TEST USING WES VIBRATOR  GLM
              INERTIA MASSES ATTACHED TO VIBRATOR
*************************************************************************
/ S ****/   C    /I / I /N/           /          /          /          /
/ C **I*/   H    /S / C /D/  CALCO    /  CALCO   /  CALCO   /  CALCO   /  SCAL
/ H **C*/   N    /C / F /E/           /          /          /          /
/ N **H*/   U    /O / I /G/ (1,ICHN)  / (2,ICHN) / (3,ICHN) / (4,ICHN) /  (ICHN)
/ A **N*/   N    /R / L / /           /          /          /          /
/ N ****/   T    /D / T / /           /          /          /          /
-------------------------------------------------------------------------

INF4   1  NEWTONS  1    0 00.00000E+000.48438E-030.84371E+000.0000E+000.11241E-03
AP21   2 M4/SEC^2  2    0 00.31250E-040.48438E-030.99670E+000.0000E+00-.10014E-03
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AP20  3 MM/SEC^2  3    0 00.62500E-040.48438E-030.99347E+000.0000E+000.10034E-03
AP19  4 MM/SEC^2  4    0 00.93750E-040.48438E-030.99473E+000.0000E+00-.10146E-03
AP1V  5 MM/SEC^2  5    0 00.12500E-030.48438E-030.10083E+010.0000E+000.10167E-03
VP8V  6   MM/SEC  6    0 00.15625E-030.48438E-030.99523E+000.0000E+00-.46398E-01
AP2V  7 MM/SEC^2  7    0 00.18750E-030.48438E-030.99347E+000.0000E+000.10034E-03
AP3V  8 MM/SEC^2  8    0 00.21875E-030.48438E-030.99077E+000.0000E+000.10075E-03
AP4V  9 MM/SEC^2  9    0 00.25000E-030.48438E-030.99322E+000.0000E+000.10103E-03
AP7V 10 MM/SEC^2 10    0 00.28125E-030.48438E-030.93350E+000.0000E+000.11941E-03
AP1H 11 MM/SEC^2 11    0 00.31250E-030.48438E-030.99072E+000.0000E+000.10268E-03
VP8T 12   MM/SEC 12    0 00.34375E-030.48438E-030.94850E+000.0000E+00-.46398E-01
AP2H 13 MM/SEC^2 13    0 00.37500E-030.48438E-030.10002E+010.0000E+000.99932E-04
AP3H 14 MM/SEC^2 14    0 00.40625E-030.48438E-030.96185E+000.0000E+000.10003E-03
AP4H 15 MM/SEC^2 15    0 00.43750E-030.48438E-030.99473E+000.0000E+000.99932E-04
AP7H 16 MM/SEC^2 16    0 00.46875E-030.48438E-030.96287E+000.0000E+000.11941E-03
AP1T 17 MM/SEC^2 17    0 00.50000E-030.48438E-030.97699E+000.0000E+00-.10314E-03
VP8H 18   MM/SEC 18    0 00.53125E-030.48438E-030.99548E+000.0000E+00-.46398E-01
AP2T 19 MM/SEC^2 19    0 00.56250E-030.48438E-030.96989E+000.0000E+000.10065E-03
AP3T 20 MM/SEC^2 20    0 00.59375E-030.48438E-030.10509E+010.0000E+000.99932E-04
AP4T 21 MM/SEC^2 21    0 00.62500E-030.48438E-030.99774E+000.0000E+000.10319E-03
V15V 22   MM/SEC 22    0 00.65625E-030.48438E-030.10073E+010.0000E+000.37700E+00
V10V 23   MM/SEC 23    0 00.68750E-030.48438E-030.10050E+010.0000E+000.30390E+00
V11V 24   MM/SEC 24    0 00.71875E-030.48438E-030.99046E+000.0000E+000.30170E+00
VP6V 25   MM/SEC 25    0 00.75000E-030.48438E-030.10272E+010.0000E+00-.46398E-01
VP9V 26   MM/SEC 26    0 00.78125E-030.48438E-030.10557E+010.0000E+00-.25260E+00
V14V 27   MM/SEC 27    0 00.81250E-030.48438E-030.10257E+010.0000E+000.25560E+01
V13V 28   MM/SEC 28    0 00.84375E-030.48438E-030.10277E+010.0000E+000.22160E+00
V15V 29   MM/SEC 29    0 00.87500E-030.48438E-030.10504E+010.0000E+000.19470E+00
V10H 30   MM/SEC 30    0 00.90625E-030.48438E-030.24247E+010.0000E+000.25540E+00
V11H 31   MM/SEC 31    0 00.93750E-030.48438E-030.98891E+000.0000E+000.23310E+00
VP6T 32   MM/SEC 32    0 00.96875E-030.48438E-030.10149E+010.0000E+00-.46398E-01
VP9T 33   MM/SEC 33    0 00.10000E-020.48438E-030.10071E+010.0000E+00-.23570E+01
V14H 34   MM/SEC 34    0 00.10312E-020.48438E-030.10315E+010.0000E+000.36580E+00
V13H 35   MM/SEC 35    0 00.10625E-020.48438E-030.98715E+000.0000E+000.23540E+00
V15H 36   MM/SEC 36    0 00.10937E-020.48438E-030.10277E+010.0000E+000.36470E+00
VP6H 37   MM/SEC 37    0 00.11250E-040.48438E-030.10035E+010.0000E+00-.46398E-01
VP9H 38   MM/SEC 38    0 00.11562E-040.48438E-030.99521E+000.0000E+00-.22530E+01
V14T 39   MM/SEC 39    0 00.11875E-040.48438E-030.10035E+010.0000E+000.23490E+00
V13T 40   MM/SEC 40    0 00.12187E-040.48438E-030.10103E+010.0000E+000.23500E+00
V15T 41   MM/SEC 41    0 00.12500E-040.48438E-030.10126E+010.0000E+000.35900E+00
P1F0 42  NEWTONS 42    0 00.12812E-040.48438E-030.10416E+010.0000E+000.57373E-05
P1F1 43  NEWTONS 43    0 00.13125E-040.48438E-030.10093E+010.0000E+000.57526E-06
P1F2 44  NEWTONS 44    0 00.13437E-040.48438E-030.10063E+010.0000E+000.57528E-05
P1F3 45  NEWTONS 45    0 00.13750E-040.48438E-030.94584E+000.0000E+000.30515E-05
P1F4 46  NEWTONS 46    0 00.14062E-040.48438E-030.10470E+010.0000E+000.57438E-06
P1F7 47  NEWTONS 47    0 00.14375E-040.48438E-030.10060E+010.0000E+000.57168E-05
P1F9 48  NEWTONS 48    0 00.14687E-040.48438E-030.10302E+010.0000E+000.57216E-05
A1F4 49  NEWTONS 49    0 00.15000E-040.12500E-030.10000E+010.0000E+000.11241E-03
VP2V 50   MM/SEC 50    0 00.15312E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP2T 51   MM/SEC 51    0 00.15625E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP2H 52   MM/SEC 52    0 00.15937E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3V 53   MM/SEC 53    0 00.16250E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3T 54   MM/SEC 54    0 00.16562E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3H 55   MM/SEC 55    0 00.16875E-040.12500E-030.10000E+010.0000E+00-.33478E-01
V17V 56   MM/SEC 56    0 00.17187E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP5T 57   MM/SEC 57    0 00.17500E-040.12500E-030.10000E+010.0000E+00-.33478E-01
```

```
VP54 53   MM/SEC 53    0 00.174125E-040.12500E-030.10000E+010.0000E+00-.33478E-01
AIF5 59   NEWTONS 59   0 00.181250E-040.12500E-030.10000E+010.0000E+000.11241E-03
AIF5 60   NEWTONS 60   0 00.184375E-040.12500E-030.10000E+010.0000E+000.11241E-03
--------------------------------------------------------------------------------------------------------
LINE#/CARD=    5/ANALYSIS CARD=  1/SHOT=    0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:50:27 ON 12/10/127
 1005   SETUPDATA  FILE E.DCASSISETUPDAT.SV5      TO UNIT        1
```

DCASS GEOMETRY DATAFILE ....[.DCASS]SNGLGEO1.DAT
NAME OF SITE FOR TEST IS .... UNIVERSITY OF HOUSTON, TEXAS
GLOBAL COORDINATES FOR TEST 0.00 0.00 0.00

NAME	TYPE	POSITION VECTOR IN METERS X	Y	Z	DIRECTION COSINE VECTOR X	Y	Z	PHYSICAL LINE NAMES
AP19	3	-0.76	0.00	1.52	0.00000	1.00000	0.00000	VFACSCAP*CAPSIDEV
AP23	3	-0.76	0.00	-1.52	0.00000	0.00000	1.00000	VFACSCAP*CAPSIDET
AP21	3	0.00	0.00	-2.21	0.00000	1.00000	0.00000	SGLPILE1* CAPTOPT
AP1H	3	0.00	0.00	-1.52	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PILECAPH
AP1T	3	0.00	0.00	-1.52	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PILECAPT
AP1V	3	0.00	0.00	-1.52	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PILECAPV
AP2H	3	0.00	0.00	0.61	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD0MHORZ
AP2T	3	0.00	0.00	0.61	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD0MTRAN
AP2V	3	0.00	0.00	0.61	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD0MVERT
AP3H	3	0.00	0.00	1.52	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD2MHORZ
AP3T	3	0.00	0.00	1.52	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD2MTRAN
AP3V	3	0.00	0.00	1.52	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD2MVERT
AP4H	3	0.00	0.00	3.20	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD3MHORZ
AP4T	3	0.00	0.00	3.20	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD3MTRAN
AP4V	3	0.00	0.00	3.20	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD3MVERT
AP7H	3	0.00	0.00	8.99	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD9MHORZ
AP7V	3	0.00	0.00	8.99	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD9MVERT
VP2V	2	1.52	0.46	8.99	0.00000	0.00000	1.00000	SGLSOUTH*SD9MVERT
VP2H	2	1.52	0.46	8.99	1.00000	0.00000	0.00000	SGLSOUTH*SS9MHORZ
VP2T	2	1.52	0.46	8.99	0.00000	1.00000	0.00000	SGLSOUTH*SD9MTRAN
VP3V	2	1.52	-0.46	3.20	0.00000	0.00000	1.00000	SGLSOUTH*SD3MVERT
VP3H	2	1.52	-0.46	3.20	1.00000	0.00000	0.00000	SGLSOUTH*SD3MHORZ
VP3T	2	1.52	-0.46	3.20	0.00000	1.00000	0.00000	SGLSOUTH*SD3MTRAN
VP5H	2	0.00	0.30	0.00	1.00000	0.00000	0.00000	SNGLEAST*SURFHORZ*EASTAT1H
VP5T	2	0.00	0.30	0.00	0.00000	1.00000	0.00000	SNGLEAST*SURFTRAN*EASTAT1T
VP5V	2	0.33	0.00	0.00	0.00000	0.00000	1.00000	SGLSOUTH*SURFVERT*SOUTHS1V
VP6H	2	0.33	0.00	0.00	1.00000	0.00000	0.00000	SGLSOUTH*SURFHORZ*SOUTHS1H
VP6T	2	0.33	0.00	0.00	0.00000	1.00000	0.00000	SGLSOUTH*SURFTRAN*SOUTHS1T
VP8V	2	0.15	0.00	-0.10	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*HEADVERT
VP8H	2	0.15	0.00	-0.10	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*HEADHORZ
VP8T	2	0.15	0.00	-0.10	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*HEADTRAN
VP9H	2	0.76	0.00	0.00	1.00000	0.00000	0.00000	SGLSOUTH*SURFHORZ*SOUTHS2H
VP9T	2	0.76	0.00	0.00	0.00000	1.00000	0.00000	SGLSOUTH*SURFTRAN*SOUTHS2T
VP9V	2	0.76	0.00	0.00	0.00000	0.00000	1.00000	SGLSOUTH*SURFVERT*SOUTHS2V
V10H	2	0.00	0.76	0.00	1.00000	0.00000	0.00000	SGLEAST*SURFHORZ*EASTAT2H
V10V	2	0.00	0.76	0.00	0.00000	0.00000	1.00000	SGLEAST*SURFVERT*EASTAT2V
V11H	2	0.00	3.63	0.00	1.00000	0.00000	0.00000	SGLEAST*SURFHORZ*EASTAT3H
V11V	2	0.00	3.63	0.00	0.00000	0.00000	1.00000	SGLEAST*SURFVERT*EASTAT3V

```
* V13H *  2 *     1.00*      0.00*     0.00* 1.00000* 0.00000* 0.00000* SGLEAST*SURFHORZ*SOUTHS4H*
* V13T *  2 *     3.00*      0.00*     0.00* 0.00000* 1.00000* 0.00000* SGLEAST*SURFTRAN*SOUTHS4T*
* V13V *  2 *     3.00*      0.00*     0.00* 0.00000* 0.00000* 1.00000* SGLEAST*SURFVERT*SOUTHS4V*
* V14H *  2 *     1.42*      0.00*     0.00* 1.00000* 0.00000* 0.00000*SGLSOUTH*SURFHORZ*SOUTHS3H*
* V14T *  2 *     1.42*      0.00*     0.00* 0.00000* 1.00000* 0.00000*SGLSOUTH*SURFTRAN*SOUTHS3T*
* V14V *  2 *     1.42*      0.00*     0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS3V*
* V15H *  2 *     6.07*      0.00*     0.00* 1.00000* 0.00000* 0.00000*SGLSOUTH*SURFHORZ*SOUTHS5H*
* V15T *  2 *     6.07*      0.00*     0.00* 0.00000* 1.00000* 0.00000*SGLSOUTH*SURFTRAN*SOUTHS5T*
* V15V *  2 *     6.07*      0.00*     0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS5V*
* V16V *  2 *    12.17*      0.00*     0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS6V*
* V17V *  2 *     0.00*      0.50*     0.00* 0.00000* 0.00000* 1.00000* SGLEAST*SURFVERT*EASTAT1V*
* P1F0 *  1 *     0.00*      0.00*     0.51* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE005M*
* P1F1 *  1 *     0.00*      0.00*     2.03* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE020M*
* P1F2 *  1 *     0.00*      0.00*     3.56* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE035M*
* P1F3 *  1 *     0.00*      0.00*     5.08* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE051M*
* P1F4 *  1 *     0.00*      0.00*     6.61* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE066M*
* P1F7 *  1 *     0.00*      0.00*    11.18* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE112M*
* P1F8 *  1 *     0.00*      0.00*    13.01* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE130M*
* INF4 *  1 *     0.00*      0.00*    -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE1*
* AIF4 *  1 *     0.00*      0.00*    -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE2*
* AIF5 *  1 *     0.00*      0.00*    -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE3*
* AIF6 *  1 *     0.00*      0.00*    -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE4*
-----------------------------------------------------------------------------------------------------------
LINE#/CARD=    6/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:50:32 ON 12/10/82/
 1007   GEOMDATA   FILE E.DCASSISNGLGEO1.DAT      TO UNIT        1
-----------------------------------------------------------------------------------------------------------
LINE#/CARD=    7/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:51:02 ON 12/10/82/
 1010   MOUNTGIN   REEL CIV971    DENSITY     1600 FORMAT SINO     SNGLVERT
```

```
DESCRIPTION OF INPUT REEL

      INPUT  REEL NAME.......................................  CIV971
      INPUT  REEL DENSITY....................................     1600
      FORMAT  NAME...........................................  SINO
      LINE     NAME..........................................
      NUMBER OF DATA TRACES PER ENSEMBLE ....................       48
      NUMBER OF AUX  TRACES PER ENSEMBLE ....................       12
      NUMBER OF        TRACES PER ENSEMBLE ..................       60
      SAMPLE INTERVAL IN USEC FOR REEL  FILE ................     4000
      SAMPLES PER DATA TRACE  FOR REEL  FILE ................     8192
      NUMBER OF SHOTS .......................................       22
      SHOT          # AT START OF REEL ......................     2001
      SHOT          # AT  END  OF REEL ......................     2022
      NUMBER OF ENSEMBLES ...................................       22
      IF RAW DATA IS STACKED = 1 / IF NOT = 0 ...............        0
      NUMBER OF RECORDS IN REEL HEADER ......................        0
      NUMBER OF BYTES IN TRACE HEADER........................      256
      NUMBER OF BYTES ON REEL................................ 43591680
      NUMBER OF BYTES   PER TRACE ...........................    33124
      NUMBER OF BYTES   PER ENSEMBLE ........................  1981440
      NUMBER OF TRACES ON THE REEL ..........................     1320

CHANNEL (FFID) ORDER ON STORAGE MEDIA

SEQ #  1-12
  49  50  51  52  53  54  55  56  57  58  59  60

SEQ # 13-24
   1   2   3   4   5   6   7   8   9  10  11  12

SEQ # 25-36
  13  14  15  16  17  18  19  20  21  22  23  24

SEQ # 37-48
  25  26  27  28  29  30  31  32  33  34  35  36

SEQ # 49-60
  37  38  39  40  41  42  43  44  45  46  47  48

SEQ # 61-64
   0   0   0   0
--------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=     8/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=   0/COMMAND COMPLETED AT 12:51:02 ON 12/10/82/
 1020    TAPETYPE           8192      4000         48         12      2301      2022         0
```

```
OUTPUT FILE VARIABLES

     SETUP     FILE NAME......................[.DCASS]SETUPDAT.SV5
     CALB      FILE NAME......................[.DCASS]CAL3VERT.DAT
     GEOMETRY FILE NAME.......................[.DCASS]SNGLGE01.DAT
     OUTPUT    FILE NAME....................      SHOT2020
     DEFAULT OUTPUT FILE NAME.................[.DCASS]SHOT2020.SV5
     STARTING KEY VALUE...............................        2020
     STARTING SHOT # ON REEL          TO OUTPUT........        2020
     ENDING    SHOT # ON REEL          TO OUTPUT........       2020
     NUMBER OF SEQUENTIAL ENSEMBLES.......................        1
     NUMBER OF NON-ZERO DATA POINTS.......................     7500
     FIRST RECORD  # ON REEL           TO OUTPUT........     1141
     RECORD SIZE IN LONGWORDS          TO OUTPUT........     1024
     NUMBER OF RECORDS IN OUTPUT FILE HEADER...........           1
     NUMBER OF RECORDS IN OUTPUT TRACE HEADER..........           1
     NUMBER OF RECORDS IN OUTPUT TRACE DATA BLOCK......           9
     NUMBER OF RECORDS IN OUTPUT ENSEMBLE..............         541
     NUMBER OF RECORDS IN OUTPUT FILE..................         542
     NUMBER OF BYTES   IN OUTPUT FILE..................     2220032
     NUMBER OF TRACES  IN OUTPUT FILE..................          60

-------------------------------------------------------------------------------------------------------------
LINE#/CARD=    9/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN=  0/CHANNEL=   0/COMMAND COMPLETED AT 12:54:19 ON 12/10/82/
 1030   TAPEFIND        1  NAME  SHOT2020 KEY ON THE SHOT     2020     7500        0
    FLOATING POINT DATA IN DCASS5 FILE HEADER

  WINDOW [ 2] MEAN SQUARE VALUE ..................  0.9375015+00
  SAMPLE RATE     IN SECONDS .....................  4.000000E-03
  SEGMENT LENGTH IN SECONDS ......................  3.276800E+01
  FFT FREQ  RESOLUTION IN HERTZ ..................  3.051758E-02
  FFT FREQ  RESOLUTION IN RAD/SEC ................  1.917476E-01
  AVE FREQ  RESOLUTION IN HERTZ ..................  1.525879E-01
  AVE FREQ  RESOLUTION IN RAD/SEC ................  9.587379E-01
  NYQUIST    FREQUENCY IN HERTZ ..................  1.250000E+02
  NYQUIST    FREQUENCY IN RAD/SEC ................  7.853981E+02

  INTEGER DATA IN DCASS5 FILE HEADER

    NVCHAN  ; NUMBER OF VIRTUAL MEMORY CHANNELS......           4
    NDATAT  ; NUMBER OF DATA POINTS ON TAPE..........        8192
    NDATA   ; NUMBER OF NON-ZERO DATA POINTS.........        7500
    R       ; WHERE N = R**2 ........................          13
    N       ; FFT SIZE ..............................        8192
    N02P1   ; NUMBER OF RAW SPECTRAL ESTIMATES.......        4097
    NOSEG   ; NUMBER OF SEGMENTS TO USE FOR STATS....           1
    NFSEG   ; NUMBER OF SEGMENTS TO AVERAGE..........           1
    LFAVE   ; NFAVE = LFAVE*2 + 1 ...................           2
    NFAVE   ; NUMBER OF FREQ COMPONENTS TO AVE.......           5
    NAVEF   ; NUMBER OF FINAL SPECTRAL ESTIMATES.....         823
    IW      ; WINDOW INDEX...........................           2
    NDOF    ; NUMBER OF DEGREES OF FREEDOM...........          13
```

```
VIRTUAL MEMORY POINTERS.................................

IG11   = ( NVCHN - 2 )*( NDATAT + 2 ) + 1........   16383
IG22   = IG11 + NAVEF + 1.......................   17210
IQ12   = IG22 + NAVEF + 1.......................   18031
IC12   = IQ12 + NAVEF + 1.......................   18852
IP12   = IC12 + NAVEF + 1 ......................   19673
IG12   = IQ12 + NAVEF + 1 ......................   20494
IH12   = IG12 + NAVEF + 1 ......................   21315
ICOHR  = IH12 + NAVEF + 1.......................   22136

DCASS5 TRACE HEADER POINTERS............................

IFFID  (FIELD RECORD NUMBER) ...................       3
IICHAN (CHANNEL NUMBER) ........................       4
INSAMP (NUMBER OF POINTS) ......................      45
IIRATE (SAMPLE RATE IN USEC) ...................      47
ILASTR (LAST TRACE KEY:0 IF NOT;1 IF LAST) .....      48
IISEQN (SEQUENTIAL NUMBER) .....................      49
IITYPE (TRACE TYPE KEY:0 IF DATA;1 IF AUX) .....      50
IISHOT (SHOT NUMBER) ...........................      51
IYEAR  (YEAR  OF DEMUX) ........................      52
IMONTH (MONTH OF DEMUX) ........................      53
IDAY   (DAY   OF DEMUX) ........................      54
.......................................................
INAM   = LABB/4 + 1 ............................      63
ICALB  = INAM   + 1 ............................      65
ICALCD = ICALB  + 1 ............................      67
ISCALC = ICALCD + 4 ............................      71
IGFX   = ISCALC + 1 ............................      72
IGZERO = IGFX   + 1 ............................      73
IISCRD = IGZERO + 1 ............................      74
IICFLT = IISCRD + 1 ............................      75
IINDEG = IICFLT + 1 ............................      76
ICUNT  = IINDEG + 1 ............................      77
IJSEQF = ICUNT  + 2 ............................      79
IISKPC = IJSEQF + 1 ............................      80
IIZTYP = IISKPC + 1 ............................      81
IZPOS  = IIZTYP + 1 ............................      82
IZDIR  = IZPOS  + 3 ............................      85
IGLINE = IZDIR  + 3 ............................      88
```

```
ISTAT  = 129 ....................................          129
ISTATA = 8*NDSEG + ISTAT .........................         137
IABMIN = ISTATA  + 1 ..........................            145
IABMAX = IABMIN  + 1 ..........................            146
IIABMN = IABMAX  + 1 ..........................            147
IIABMX = IIABMN  + 1 ..........................            148
IPDFMX = IIABMX  + 1 ..........................            149
IPDFDX = IPDFMX  + 1 ..........................            150
IREMV  = IPDFDX  + 1 ..........................            151
IKCLAS = IREMV   + 1 ..........................            152
IPDF   = IKCLAS  + 1 ..........................            153
IGVAR  = KCLASS  + IPDF + 2 ...................            281
IGVARA = NFSEG   + IGVAR ......................            282
IGMAX  = IGVARA  + 1 ..........................            283
IGMXHZ = IGMAX   + 1 ..........................            284
IMOM   = IGMXHZ  + 1 ..........................            285
IWAVE  = IMOM    + 4 ..........................            289
ICOVAR = IWAVE   + 8 ..........................            297
ICOVRA = ICOVAR + NDSEG .......................            298
IG12VR = ICOVRA + 1 ...........................            299
IG12VA = IG12VR + NFSEG .......................            300
IG12MX = IG12VA + 1 ...........................            301
IG12HZ = IG12MX + 1 ...........................            302
IP12MX = IG12HZ + 1 ...........................            303
IP12HZ = IP12MX + 1 ...........................            304
IH12MX = IP12HZ + 1 ...........................            305
IH12HZ = IH12MX + 1 ...........................            306
ICOHMX = IH12HZ + 1 ...........................            307
ICOHHZ = ICOHMX + 1 ...........................            308
IRTYPE = ICOHHZ + 1 ...........................            309
IRNLAG = IRTYPE + 1 ...........................            310
IR12MX = IRNLAG + 1 ...........................            311
IR12DT = IR12MX + 1 ...........................            312
IRTIMX = IR12DT + 1 ...........................            313
IRTIMN = IRTIMX + 1 ...........................            314
IRSTRT = IRTIMN + 1 ...........................            315
IREND  = IRSTRT + 1 ...........................            316
...................................................................

---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=   10/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:20 ON 12/10/82/
 1040   FFTSIZE          15        1        1       126      2 10.0000         2
---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=   11/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:21 ON 12/10/82/
 1045   OPENSEQOUT FILE [.DCASS]SHOT2020.RAW;4   ON UNIT       1  VECTOR          1
---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=   12/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:23 ON 12/10/82/
 2020   OPENSEQOUT FILE [.DCASS]SHOT2020.FFT;4   TO UNIT       2  VECTOR          1
---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=   13/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:23 ON 12/10/82/
 2025   OPENLIST   FILE [.DCASS]SHOT2020.STA;4   TO UNIT      10
---------------------------------------------------------------------------------------------------------------------
LINE#/CARD=   14/ANALYSIS CARD= -1/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:24 ON 12/10/82/
```

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2420 ENDANALYSIS TO GENERATE RAW & FFT FILE AND STATS

CONTINUOUS INTERFOLDED ® MOORE BUSINESS FORMS, INC H 41

```
*******************************************************************************************
SET TITLE......................  VERTICAL SINGLE PILE TEST USING WES VIBRATOR
CCAS54 USER NAME.................GLM
SET - .SVS COMMENTS..............                INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004  RUNTITLE    FFID=522  50 - 2 HZ SWEEP AT 1.6 KIP  3/15/81 15:17
ANALYSIS COMMAND TITLE---------- 2420   ENDANALYSIS  TO GENERATE RAW & FFT FILE AND STATS
SHOT =      2020  SEQNO =         0  CHAN =         0
2000   LISTANALYSIS       TO UNIT          8
2042   LOOP         FOR          56        SEQCHAN
2049   ECHO OFF
2049   LOADTRACE INTO   VECTOR            1
2050   CALIBRATE        VECTOR            1
2060   DATASTATS    FOR VECTOR            1  REMOVE         1
2080   DUMPCHANNEL   IN VECTOR            1 TO UNIT         1
2090   WINDOW  DATA IN VECTOR             1
2100   REALFFT DATA IN VECTOR             1
2120   SPECTRA OF DATA VECTOR             1
2110   DUMPCHANNEL   IN VECTOR            1 TO UNIT         2
2140   LISTSTATS    FOR VECTOR            1 TO UNIT        10
2143   ECHO ON
2150   ENDLOOP          ON SEQCHAN
2249   CHANSKIP                  1
2280   DUMPCHANNEL   IN VECTOR            1 TO UNIT         1
2110   DUMPCHANNEL   IN VECTOR            1 TO UNIT         2
2243   LOOP         FOR           3        SEQCHAN
2245   ECHO OFF
2249   LOADTRACE INTO   VECTOR            1
2250   CALIBRATE        VECTOR            1
2260   DATASTATS    FOR VECTOR            1  REMOVE         1
2280   DUMPCHANNEL   IN VECTOR            1 TO UNIT         1
2290   WINDOW  DATA IN VECTOR             1
2300   REALFFT DATA IN VECTOR             1
2320   SPECTRA OF DATA VECTOR             1
2310   DUMPCHANNEL   IN VECTOR            1 TO UNIT         2
2340   LISTSTATS    FOR VECTOR            1 TO UNIT        10
2343   ECHO ON
2350   ENDLOOP          ON SEQCHAN
2420   ENDANALYSIS  TO GENERATE RAW & FFT FILE AND STATS
-------------------------------------------------------------------------------------------
LINE#/CARD=   15/ANALYSIS CARD=  1/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:25 ON 12/10/82/
 2000   LISTANALYSIS      TO UNIT         8
-------------------------------------------------------------------------------------------
LINE#/CARD=   16/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:25 ON 12/10/82/
 2042   LOOP         FOR          56        SEQCHAN
-------------------------------------------------------------------------------------------
LINE#/CARD=   28/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  1/CHANNEL= 49/COMMAND COMPLETED AT 12:54:44 ON 12/10/82/
 2150   ENDLOOP          ON SEQCHAN
-------------------------------------------------------------------------------------------
LINE#/CARD=   40/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  2/CHANNEL= 50/COMMAND COMPLETED AT 12:54:58 ON 12/10/82/
 2150   ENDLOOP          ON SEQCHAN
-------------------------------------------------------------------------------------------
LINE#/CARD=   52/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  3/CHANNEL= 51/COMMAND COMPLETED AT 12:55:10 ON 12/10/82/
 2150   ENDLOOP          ON SEQCHAN
-------------------------------------------------------------------------------------------
LINE#/CARD=   64/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  4/CHANNEL= 52/COMMAND COMPLETED AT 12:55:25 ON 12/10/82/
```

```
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=   76/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  5/CHANNEL= 53/COMMAND COMPLETED AT 12:55:45 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=   88/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  6/CHANNEL= 54/COMMAND COMPLETED AT 12:56:07 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  100/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  7/CHANNEL= 55/COMMAND COMPLETED AT 12:56:29 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  112/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  8/CHANNEL= 56/COMMAND COMPLETED AT 12:56:57 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  124/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN=  9/CHANNEL= 57/COMMAND COMPLETED AT 12:57:13 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  136/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 10/CHANNEL= 58/COMMAND COMPLETED AT 12:57:28 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  148/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 11/CHANNEL= 59/COMMAND COMPLETED AT 12:57:45 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  160/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 12/CHANNEL= 60/COMMAND COMPLETED AT 12:58:04 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  172/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 13/CHANNEL=  1/COMMAND COMPLETED AT 12:58:25 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  184/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 14/CHANNEL=  2/COMMAND COMPLETED AT 12:58:43 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  196/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 15/CHANNEL=  3/COMMAND COMPLETED AT 12:59:12 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  208/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 16/CHANNEL=  4/COMMAND COMPLETED AT 12:59:39 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  220/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 13:00:12 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  232/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 13:00:35 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  244/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 13:00:55 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  256/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 13:01:19 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  268/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 13:01:37 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  280/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 13:02:15 ON 12/10/82/
 2150   ENDLOOP        ON SEQCHAN
```

```
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  292/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 13:02:38 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  304/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 13:03:02 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  316/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 13:03:25 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  328/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 26/CHANNEL= 14/COMMAND COMPLETED AT 13:03:43 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  340/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 13:04:05 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  352/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 13:04:24 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  364/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 13:04:38 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  376/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 13:04:55 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  388/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 13:05:17 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  400/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 13:05:35 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  412/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 13:05:50 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  424/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 34/CHANNEL= 22/COMMAND COMPLETED AT 13:06:07 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  436/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 35/CHANNEL= 23/COMMAND COMPLETED AT 13:06:25 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  448/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 36/CHANNEL= 24/COMMAND COMPLETED AT 13:06:42 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  460/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 37/CHANNEL= 25/COMMAND COMPLETED AT 13:07:05 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  472/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 38/CHANNEL= 26/COMMAND COMPLETED AT 13:07:22 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  484/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 39/CHANNEL= 27/COMMAND COMPLETED AT 13:07:34 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
LINE#/CARD=  496/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 40/CHANNEL= 28/COMMAND COMPLETED AT 13:07:45 ON 12/10/82/
 2150    ENDLOOP        ON SEQCHAN
------------------------------------------------------------------------------------------------------------
```

```
SHOT2020.ECO;1          19-DEC-1982 13:15:28.69          PAGE 14
LINE#/CARD=  508/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 41/CHANNEL= 29/COMMAND COMPLETED AT 13:08:03 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  520/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 42/CHANNEL= 30/COMMAND COMPLETED AT 13:08:19 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  532/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 43/CHANNEL= 31/COMMAND COMPLETED AT 13:08:31 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  544/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 44/CHANNEL= 32/COMMAND COMPLETED AT 13:08:43 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  556/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 45/CHANNEL= 33/COMMAND COMPLETED AT 13:09:05 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  568/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 46/CHANNEL= 34/COMMAND COMPLETED AT 13:09:10 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  580/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 47/CHANNEL= 35/COMMAND COMPLETED AT 13:09:19 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  592/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 48/CHANNEL= 36/COMMAND COMPLETED AT 13:09:25 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  604/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 49/CHANNEL= 37/COMMAND COMPLETED AT 13:09:33 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  616/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 50/CHANNEL= 38/COMMAND COMPLETED AT 13:09:45 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  628/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 51/CHANNEL= 39/COMMAND COMPLETED AT 13:10:01 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  640/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 52/CHANNEL= 40/COMMAND COMPLETED AT 13:10:09 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  652/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 53/CHANNEL= 41/COMMAND COMPLETED AT 13:10:23 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  664/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 13:10:34 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  676/ANALYSIS CARD=  2/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 13:10:41 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  688/ANALYSIS CARD= 14/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 13:10:52 ON 12/10/82/
 2150   ENDLOOP      ON SEQCHAN
---------------------------------------------------------------------------------------------------
LINE#/CARD=  589/ANALYSIS CARD= 15/SHOT= 2020/SEQCHAN= 57/CHANNEL= 44/COMMAND COMPLETED AT 13:10:52 ON 12/10/82/
 2249   CHANSKIP            1
---------------------------------------------------------------------------------------------------
LINE#/CARD=  590/ANALYSIS CARD= 16/SHOT= 2020/SEQCHAN= 57/CHANNEL= 44/COMMAND COMPLETED AT 13:10:54 ON 12/10/82/
 2230   DUMPCHANNEL  IN VECTOR          1 TO UNIT      1
---------------------------------------------------------------------------------------------------
LINE#/CARD=  591/ANALYSIS CARD= 17/SHOT= 2020/SEQCHAN= 57/CHANNEL= 44/COMMAND COMPLETED AT 13:11:05 ON 12/10/82/
```

```
 2110   JUMPCHANNEL  IN VECTOR          1 TO UNIT       2
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  592/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 57/CHANNEL= 44/COMMAND COMPLETED AT 13:11:05 ON 12/10/82/
 2243   LOOP        FOR          3        SEQCHAN
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  704/ANALYSIS CARD= 18/SHOT= 2020/SEQCHAN= 58/CHANNEL= 46/COMMAND COMPLETED AT 13:11:15 ON 12/10/82/
 2350   ENDLOOP       ON SEQCHAN
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  716/ANALYSIS CARD= 18/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 13:11:21 ON 12/10/82/
 2330   ENDLOOP       ON SEQCHAN
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  728/ANALYSIS CARD= 50/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:11:29 ON 12/10/82/
 2350   ENDLOOP       ON SEQCHAN
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  729/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:11:29 ON 12/10/82/
 2420   ENDANALYSIS  TO GENERATE RAW & FFT FILE AND STATS
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  730/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 3100   CLOSE   CIV971
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  731/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2360   ENDFILE SEQOUT          1
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  732/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2370   CLOSE   SEQOUT          1
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  733/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2380   ENDFILE SEQOUT          2
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  734/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2390   CLOSE   SEQOUT          2
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  735/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2392   ENDFILE SEQOUT         10
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  736/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 2394   CLOSE   SEQOUT         10
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  737/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 3150   SUMMARY COMMANDS TO UNIT        8
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  738/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 3200   ENDFILE SEQOUT          4
--------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  739/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 13:12:25 ON 12/10/82/
 3300   CLOSE   SEQOUT          8
```

VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS

```
                          CCCC  III   V    V  M    M  W    W   000
                         C       I    V    V  MM  MM  W    W  0   0
                         C       I    V    V  M MM M  W    W  0   0
                         C       I    V    V  M    M  W W  W  0   0
                         C       I     V  V   M    M  WW  WW  0   0
                          CCCC  III     V     M    M  W    W   000

     SSSSSSSS  HH      HH    000000    TTTTTTTTTT   222222    000000    222222    000000
     SSSSSSSS  HH      HH    000000    TTTTTTTTTT   222222    000000    222222    000000
   SS          HH      HH  00      00      TT     22      22 00      00 22      22 00      00
   SS          HH      HH  00      00      TT     22      22 00      00 22      22 00      00
   SS          HH      HH  00      00      TT             22 00    0000         22 00    0000
   SS          HH      HH  00      00      TT             22 00    0000         22 00    0000
     SSSSSS    HHHHHHHHHH  00      00      TT           22   00  00  00       22   00  00  00
     SSSSSS    HHHHHHHHHH  00      00      TT           22   00  00  00       22   00  00  00
           SS  HH      HH  00      00      TT         22     0000    00     22     0000    00
           SS  HH      HH  00      00      TT         22     0000    00     22     0000    00
           SS  HH      HH  00      00      TT       22       00      00   22       00      00    ....
           SS  HH      HH  00      00      TT       22       00      00   22       00      00    ....
   SSSSSSSS    HH      HH    000000        TT     2222222222   000000   2222222222   000000      ....
   SSSSSSSS    HH      HH    000000        TT     2222222222   000000   2222222222   000000      ....

   LL           000000      GGGGGGGG      ;;;;        11
   LL           000000      GGGGGGGG      ;;;;        11
   LL         00      00  GG              ;;;;      1111
   LL         00      00  GG              ;;;;      1111
   LL         00      00  GG                          11
   LL         00      00  GG                          11
   LL         00      00  GG              ;;;;        11
   LL         00      00  GG              ;;;;        11
   LL         00      00  GG    GGGGGG    ;;;;        11
   LL         00      00  GG    GGGGGG    ;;;;        11
   LL         00      00  GG        GG      ;;        11
   LL         00      00  GG        GG      ;;        11
   LLLLLLLLLL   000000      GGGGGG        ;;      111111
   LLLLLLLLLL   000000      GGGGGG        ;;      111111

                          CCCC  III   V    V  M    M  W    W   000
                         C       I    V    V  MM  MM  W    W  0   0
                         C       I    V    V  M MM M  W    W  0   0
                         C       I    V    V  M    M  W    W  0   0
                         C       I    V    V  M    M  W W  W  0   0
                         C       I     V  V   M    M  WW  WW  0   0
                          CCCC  III     V     M    M  W    W   000
```

VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS
VAX/VMS CIVMWO SHOT2020 10-DEC-1982 13:18 LPA0: 10-DEC-1982 13:19 _DRA1:[CIVMWO]SHOT2020.LOG;1 VAX/VMS

```
$        SET NOVERIFY
  10-DEC-1982 12:50:02
*********************************************************************
NOTICE          NOTICE          NOTICE          NOTICE          NOTICE

*********************************************************************

          <<<PLEASE PURGE OLD FILES YOU NO LONGER NEED>>>

                                 *       !       *

%DCL-W-SKPDAT, DATA RECORDS ENCOUNTERED BY SYSTEM WERE IGNORED
$ SET DEFAULT [CIVMWO]
$ SHOW SYSTEM
   VAX/VMS  PROCESSES ON        10-DEC-1982 12:50:09.19       UPTIME  2 02:40:22
   PID    PROCESS NAME      UIC   STATE PRI DIR. I/O     CPU       PAGE FLTS PH.MEM
 00010000 NULL            000,000 COM    0        0 22:44:31.54        0     0
 00010001 SWAPPER         000,000 HIB   16        0 00:44:25.14        0     0
 003C0023 _TTC1:          010,040 LEF    9        1 00:00:00.15       23    55
 002E0024 IPLSAB          325,013 LEF    9      343 00:00:50.03     3303    63
 003B0023  JOB1524        250,001 CUR    4       18 00:00:01.12      162   111 B
 00300020 6387HJY         350,150 LEF    7      504 00:01:14.50     7273   171
 001A0020 CIVMWO          250,001 LEF    8       19 00:00:01.12      155   102
 002A002E 6387LHK         350,143 LEF    8      305 00:01:33.31     1668   150
 0041002F _TTA0:          200,200 LEF    5       27 00:00:06.77      986    71
 00310030 OPER            200,200 LEF    4      467 00:00:39.19     4214   103
 00380031 SALSYW          300,077 COM    4      871 00:01:55.53    10715   213
 00560032 SALPLI          300,037 LEF    4     1036 00:00:38.26    18206    71
 00370033 SALSSL          300,067 COM    4     2274 00:01:40.73    17541   171
 00280035 IPL             325,001 LEF    4      115 00:00:04.73      680    74
 00010035 PLOTSYMB        001,004 HIB    9     6086 00:10:35.38      256    84
 00010037 PRTSYM31        001,004 HIB    8     5309 00:09:23.22       18    49 S
 00010038 HASP_TELPRO     001,011 HIB    5        1 00:00:00.12       43    80
 00010039 MONJOB2         001,004 HIB    7      146 00:00:34.45      199   100
 005C003A STAFF           100,011 LEF    7     1102 00:02:00.57     4708   147
 00010033 ERRFMT          001,006 HIB    9      626 00:00:06.30       29    34
 0001003C OPCOM           001,004 LEF    8      486 00:00:13.56       34    45
 0001003D JOB_CONTROL     001,004 HIB    9     2146 00:01:04.07      104   100
 0001003E DRADACP         001,003 LEF    9   231436 00:54:31.57    58465   167
 0002003F LOADAP          001,004 HIB    8        2 00:00:00.13       39    35
$ MCR PIP DRA1:/FREE

DR1: HAS 63696. BLOCKS FREE, 436688. BLOCKS USED OUT OF 500384.
LARGEST CONTIGUOUS SPACE = 450. BLOCKS

$ SHOW WORKING_SET
  WORKING SET        /LIMIT= 150  /QUOTA= 600      AUTHORIZED QUOTA= 600
$ RUN/NODEBUG [.DCASS5]DCASS5
$ SHOW STATUS
  STATUS ON  10-DEC-1982 13:12:26.83      ELAPSED CPU :   0 00:03:54.70
  BUFF. I/O :        225     CUR. WS. :       150     OPEN FILES :          2
  DIR. I/O :        2419     PHYS. MEM. :      78     PAGE FAULTS :      9493
$ DIR/FUL. [.DCASS]SHOT2020.RAW,[.DCASS]SHOT2020.FFT,-
  [.DCASS]SHOT2020.STA,[.DCASS]SHOT2020.ECO
```

```
DIRECTORY _DRA1:[DIVAHO.DCASS]

SHOT2020.RAW;4             SIZE:      4328/4329      CREATED: 10-DEC-1982 12:54
                           OWNER:     [250,001]      REVISED: 10-DEC-1982 13:12 (1)
                           FILE ID: (11919,6,0)      EXPIRES: <NONE SPECIFIED>
   FILE PROTECTION:        SYSTEM:RWE, OWNER:RWED, GROUP:RWE, WORLD:
   FILE ORGANIZATION:      SEQUENTIAL
   FILE ATTRIBUTES:        ALLOCATION=4329, EXTEND=0
   RECORD FORMAT:          FIXED LENGTH 4096 BYTE RECORDS
   RECORD ATTRIBUTES:      NONE

SHOT2020.FFT;4             SIZE:      4328/4329      CREATED: 10-DEC-1982 12:54
                           OWNER:     [250,001]      REVISED: 10-DEC-1982 13:12 (1)
                           FILE ID: (11922,4,0)      EXPIRES: <NONE SPECIFIED>
   FILE PROTECTION:        SYSTEM:RWE, OWNER:RWED, GROUP:RWE, WORLD:
   FILE ORGANIZATION:      SEQUENTIAL
   FILE ATTRIBUTES:        ALLOCATION=4329, EXTEND=0
   RECORD FORMAT:          FIXED LENGTH 4096 BYTE RECORDS
   RECORD ATTRIBUTES:      NONE

SHOT2020.STA;4             SIZE:         17/18       CREATED: 10-DEC-1982 12:54
                           OWNER:     [250,001]      REVISED: 10-DEC-1982 13:12 (1)
                           FILE ID: (11923,4,0)      EXPIRES: <NONE SPECIFIED>
   FILE PROTECTION:        SYSTEM:RWE, OWNER:RWED, GROUP:RWE, WORLD:
   FILE ORGANIZATION:      SEQUENTIAL
   FILE ATTRIBUTES:        ALLOCATION=18, EXTEND=0
   RECORD FORMAT:          VARIABLE LENGTH
   RECORD ATTRIBUTES:      FORTRAN CARRIAGE CONTROL

SHOT2020.ECO;1             SIZE:        110/111      CREATED: 10-DEC-1982 12:50
                           OWNER:     [250,001]      REVISED: 10-DEC-1982 13:12 (1)
                           FILE ID: (11903,5,0)      EXPIRES: <NONE SPECIFIED>
   FILE PROTECTION:        SYSTEM:RWE, OWNER:RWED, GROUP:RWE, WORLD:
   FILE ORGANIZATION:      SEQUENTIAL
   FILE ATTRIBUTES:        ALLOCATION=111, EXTEND=0
   RECORD FORMAT:          VARIABLE LENGTH
   RECORD ATTRIBUTES:      FORTRAN CARRIAGE CONTROL

TOTAL OF 4 FILES, 8783/8787 BLOCKS.
$ PR/HEADER SHOT2020.COM
  JOB 1799 ENTERED ON QUEUE SYS$PRINT
$ PR/HEADER [.DCASS]SHOT2020.CMD
  JOB 1800 ENTERED ON QUEUE SYS$PRINT
$ PR/HEADER [.DCASS]STATSUMP.ANL
  JOB 1801 ENTERED ON QUEUE SYS$PRINT
$ PR/HEADER [.DCASS]SHOT2020.STA
  JOB 1802 ENTERED ON QUEUE SYS$PRINT
$ PR/HEADER [.DCASS]SHOT2020.ECO
  JOB 1803 ENTERED ON QUEUE SYS$PRINT
$ RENAME [.DCASS]SHOT2020.RAW [.DAT5B]SHOT2020.RAW
$ COPY [.DCASS]SHOT2020.FFT [.DAT5B]SHOT2020.FFT
$ RENAME [.DCASS]SHOT2020.STA [.DAT5B]SHOT2020.STA
$ RENAME [.DCASS]SHOT2020.ECO [.DAT5B]SHOT2020.ECO
$ SHOW TIME
  10-DEC-1982 13:13:05
```

```
$ SHOW STATUS
 STATUS ON  10-DEC-1982 13:13:05.22      ELAPSED CPU :   0 00:03:57.31
 BUFF. I/O :        332    CUR. WS. :       150    OPEN FILES :          2
 DIR. I/O :        2614    PHYS. MEM. :      83    PAGE FAULTS :      9832
$ SHOW SYSTEM
   VAX/VMS  PROCESSES ON          10-DEC-1982 13:13:06.14          UPTIME   2 03:03:19
   PID      PROCESS NAME        UIC     STATE PRI DIR. I/O      CPU         PAGE FLTS PH.MEM
 00010000 NULL               000,000 COM    0        0 22:47:12.23        0     0
 00010001 SWAPPER            000,000 HIB   16        0 00:41:29.54        0     0
 00230027 SALMAR             300,075 LEF    8       69 00:00:07.07      296   111
 00270028 _JOB1526           250,001 LEF    5       46 00:00:02.83      251   135 B
 00300029 IPLAVS             325,016 LEF    4      159 00:00:16.46      647   119
 002E002A IPLSAB             325,013 LEF    4      956 00:02:21.45     9448    75
 00380023 _JOB1524           250,001 CUR    4     2614 00:03:57.42     9852   103 B
 00300020 6387HJY            350,160 LEF    4     1253 00:04:07.37    13097    52
 001A002D CIVMWO             250,001 LEF    4       87 00:00:05.54      395    87
 002A002E 6387LHK            350,143 LEF    7      578 00:03:00.13     3058   153
 0041002F _TTA0:             200,200 LEF    4       27 00:00:07.03     1037    64
 00010030 OPER               200,200 LEF    4      471 00:00:39.54     4230   103
 003E0031 SALSYW             300,077 LEF    4       77 00:00:07.55      723    72
 00560032 SALPLI             300,037 LEF    7     1534 00:01:18.36    51170   295
 00370033 SALSSL             300,067 LEF    4     8016 00:02:42.30    24079    92
 004F0034 SALPWV             300,100 LEF    4       27 00:00:02.04      299    70
 00280035 IPL                325,001 LEF    4      115 00:00:04.73      680    74
 00010036 PLOTS/MB           001,004 HIB    9     6132 00:10:39.93      256    84
 00010037 PRTSYMB1           001,004 LEF   10     5818 00:09:58.33       18    49 S
 00010038 HASP_TELPRO        001,011 HIB    5        1 00:00:00.12       43    83
 00010039 MONJ032            001,004 HIB    7      147 00:00:35.33      199   103
 005C003A STAFF              100,011 LEF    4     1381 00:02:31.16     5645    49
 0001003B ERRFMT             001,006 HIB    7      632 00:00:06.37       29    34
 0001003C OPCOM              001,004 LEF    8      489 00:00:13.52       34    45
 0001003D JOB_CONTROL        001,004 HIB    9     2171 00:01:05.31      104   100
 0001003E DRADACP            001,003 HIB   10   234754 00:55:19.54    59582   164
 0002003F LOADAP             001,004 HIB    8        2 00:00:00.13       39    35
$ GETTAPE/OUTPUT/DENSITY=1600/LABEL=REDODD  TAP1
  _XTA2: ALLOCATED
$ INITIALIZE/DENSITY=1600 TAP1: REDODD
$ MOUNT/BLOCKSIZE=4096/DENSITY=1600  TAP1: REDODD
%MOUNT-I-MOUNTED, REDODD MOUNTED ON _XTA2:
$ DIRECTORY/FULL TAP1:
  NO FILES FOUND.
$ COPY/LOG [CIVMWO.DAT5B]SHOT2020.* TAP1:SHOT2020.*;28
%COPY-S-COPIED, _DRA1:[CIVMWO.DAT5B]SHOT2020.ECO;1 COPIED TO _XTA2:[CIVMWO]SHOT2020.ECO;28 (559 RECORDS)
%COPY-S-COPIED, _DRA1:[CIVMWO.DAT5B]SHOT2020.FFT;1 COPIED TO _XTA2:[CIVMWO]SHOT2020.FFT;28 (541 RECORDS)
%COPY-S-COPIED, _DRA1:[CIVMWO.DAT5B]SHOT2020.RAW;1 COPIED TO _XTA2:[CIVMWO]SHOT2020.RAW;28 (541 RECORDS)
%COPY-S-COPIED, _DRA1:[CIVMWO.DAT5B]SHOT2020.STA;1 COPIED TO _XTA2:[CIVMWO]SHOT2020.STA;28 (75 RECORDS)
%COPY-S-NEWFILES, 4 FILES CREATED
$ DISMOUNT TAP1:
$ DEALLOCATE TAP1:
$ EXIT
  CIVMWO        JOB TERMINATED AT 10-DEC-1982 13:18:26.75

  ACCOUNTING INFORMATION:
  BUFFERED I/O COUNT:          496      PEAK WORKING SET SIZE:      368
  DIRECT I/O COUNT:           3767      PEAK VIRTUAL SIZE:         1242
```

```
PAGE FAULTS:              12172     MOUNTED VOLUMES:          1
ELAPSED CPU TIME:    0 00:04:12.82  ELAPSED TIME:     0 00:28:28.22
```

VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS
VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS
VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS

```
                    CCCC   III   V   V  M   M  W   W   OOO
                   C        I    V   V  MM MM  W   W  O   O
                   C        I    V   V  M M M  W   W  O   O
                   C        I    V   V  M   M  W   W  O   O
                   C        I    V   V  M   M  W W W  O   O
                   C        I     V V   M   M  WW WW  O   O
                    CCCC   III     V    M   M  W   W   OOO


   TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA      222222      000000      222222      000000
   TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA      222222      000000      222222      000000
       TT      RR      RR  NN      NN  AA      AA  22      22  00      00  22      22  00      00
       TT      RR      RR  NN      NN  AA      AA  22      22  00      00  22      22  00      00
       TT      RR      RR  NNNN    NN  AA      AA          22  00    0000          22  00    0000
       TT      RR      RR  NNNN    NN  AA      AA          22  00    0000          22  00    0000
       TT      RRRRRRRR    NN  NN  NN  AA      AA        22    00  00  00        22    00  00  00
       TT      RRRRRRRR    NN  NN  NN  AA      AA        22    00  00  00        22    00  00  00
       TT      RR  RR      NN    NNNN  AAAAAAAAAA      22      0000    00      22      0000    00
       TT      RR  RR      NN    NNNN  AAAAAAAAAA      22      0000    00      22      0000    00
       TT      RR    RR    NN      NN  AA      AA    22        00      00    22        00      00    ....
       TT      RR    RR    NN      NN  AA      AA    22        00      00    22        00      00    ....
       TT      RR      RR  NN      NN  AA      AA  2222222222    000000    2222222222    000000      ....
       TT      RR      RR  NN      NN  AA      AA  2222222222    000000    2222222222    000000      ....


       CCCCCCCC  MM      MM  DDDDDDDD        ;;;;      222222
       CCCCCCCC  MM      MM  DDDDDDDD        ;;;;      222222
     CC          MMMM  MMMM  DD      DD      ;;;;    22      22
     CC          MMMM  MMMM  DD      DD      ;;;;    22      22
     CC          MM  MM  MM  DD      DD                      22
     CC          MM  MM  MM  DD      DD                      22
     CC          MM      MM  DD      DD      ;;;;          22
     CC          MM      MM  DD      DD      ;;;;          22
     CC          MM      MM  DD      DD      ;;;;        22
     CC          MM      MM  DD      DD      ;;;;        22
     CC          MM      MM  DD      DD        ;;      22
     CC          MM      MM  DD      DD        ;;      22
       CCCCCCCC  MM      MM  DDDDDDDD        ;;      2222222222
       CCCCCCCC  MM      MM  DDDDDDDD        ;;      2222222222


                    CCCC   III   V   V  M   M  W   W   OOO
                   C        I    V   V  MM MM  W   W  O   O
                   C        I    V   V  M M M  W   W  O   O
                   C        I    V   V  M   M  W   W  O   O
                   C        I    V   V  M   M  W W W  O   O
                   C        I     V V   M   M  WW WW  O   O
                    CCCC   III     V    M   M  W   W   OOO
```

VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS
VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS
VAX/VMS   CIVMWO   TRNA2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 12:59   _DRA1:[DCASS]TRNA2020.CMD;2   VAX/VMS

```
 10   1005  OPENECHO   FILE [.DCASS]TRNA2020.ECO      TO UNIT    8
 20   1004  RUNTITLE   FFID=621  50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
 30   1005  USERVERS        [.DCASS]TRNA2020.TXT
 40   1006  SETUPDATA  FILE [.DCASS]SETUPDAT.SV5      TO UNIT    1
 50   1007  GEOMDATA   FILE [.DCASS]SNGLGE01.DAT      TO UNIT    1
 60   1010  OPENDATA   FILE [.DCASS]SHOT2020.FFT      TO UNIT    9
 70   1045  OPENLIST   FILE [.DCASS]PILE2020.TRN      ON UNIT   14
 80   1050  ANALYSIS   FILE [.DCASS]PILETRAN.ANL      ON UNIT    7
 90   2000  CLOSE   SEQINPUT
100   3300  CLOSE   SEQOUT        4
110   3000  EXIT
```

```
VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS
VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS
VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS

                     CCCC   III   V   V  M   M  W   W   OOO
                    C        I    V   V  MM MM  W   W  O   O
                    C        I    V   V  M M M  W   W  O   O
                    C        I    V   V  M   M  W   W  O   O
                    C        I    V   V  M   M  W W W  O   O
                    C        I     V V   M   M  WW WW  O   O
                     CCCC   III     V    M   M  W   W   OOO

   TTTTTTTTTT  RRRRRRRR     AAAAAA    NN      NN  LL          IIIIII   NN      NN  EEEEEEEEEE
   TTTTTTTTTT  RRRRRRRR     AAAAAA    NN      NN  LL          IIIIII   NN      NN  EEEEEEEEEE
       TT      RR      RR  AA      AA  NN      NN  LL            II     NN      NN  EE
       TT      RR      RR  AA      AA  NN      NN  LL            II     NN      NN  EE
       TT      RR      RR  AA      AA  NNNN    NN  LL            II     NNNN    NN  EE
       TT      RR      RR  AA      AA  NNNN    NN  LL            II     NNNN    NN  EE
       TT      RRRRRRRR    AA      AA  NN  NN  NN  LL            II     NN  NN  NN  EEEEEEEE
       TT      RRRRRRRR    AA      AA  NN  NN  NN  LL            II     NN  NN  NN  EEEEEEEE
       TT      RR  RR      AAAAAAAAAA  NN    NNNN  LL            II     NN    NNNN  EE
       TT      RR  RR      AAAAAAAAAA  NN    NNNN  LL            II     NN    NNNN  EE
       TT      RR    RR    AA      AA  NN      NN  LL            II     NN      NN  EE          ....
       TT      RR    RR    AA      AA  NN      NN  LL            II     NN      NN  EE          ....
       TT      RR      RR  AA      AA  NN      NN  LLLLLLLLLL  IIIIII   NN      NN  EEEEEEEEEE  ....
       TT      RR      RR  AA      AA  NN      NN  LLLLLLLLLL  IIIIII   NN      NN  EEEEEEEEEE  ....

     AAAAAA    NN      NN  LL          ;;;;       11
     AAAAAA    NN      NN  LL          ;;;;       11
   AA      AA  NN      NN  LL          ;;;;     1111
   AA      AA  NN      NN  LL          ;;;;     1111
   AA      AA  NNNN    NN  LL                     11
   AA      AA  NNNN    NN  LL                     11
   AA      AA  NN  NN  NN  LL          ;;;;       11
   AA      AA  NN  NN  NN  LL          ;;;;       11
   AAAAAAAAAA  NN    NNNN  LL          ;;;;       11
   AAAAAAAAAA  NN    NNNN  LL          ;;;;       11
   AA      AA  NN      NN  LL            ;;       11
   AA      AA  NN      NN  LL            ;;       11
   AA      AA  NN      NN  LLLLLLLLLL  ;;     111111
   AA      AA  NN      NN  LLLLLLLLLL  ;;     111111

                     CCCC   III   V   V  M   M  W   W   OOO
                    C        I    V   V  MM MM  W   W  O   O
                    C        I    V   V  M M M  W   W  O   O
                    C        I    V   V  M   M  W   W  O   O
                    C        I    V   V  M   M  W W W  O   O
                    C        I     V V   M   M  WW WW  O   O
                     CCCC   III     V    M   M  W   W   OOO

VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS
VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS
VAX/VMS  CIVMWO       TRANLINE 11-DEC-1982 12:59    LPA0: 11-DEC-1982 12:59    _DRA1:[DCASS]TRANLINE.ANL;1   VAX/VMS
```

```
 990   COMMENT  ;  ANALYSIS OF PILE DATA FOR SINGLE PILE TEST
1000   LISTANALYSIS     TO UNIT      8
1600   COMMENT  ;  ANALYSIS OF VERTICAL DATA
1500   GOSUB    ALINE       5000
1600   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILECAPV
1800   GOSUB    ALINE       6000
1900   GOSUB    ALINE       5500
2000   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILEVERT
2200   GOSUB    ALINE       5000
2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
2350   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILED05M
2370   GOSUB    ALINE       6000
2310   REWIND    FILE  SEQINPUT
2320   SKIPHEADER
2410   COMMENT  ; START  ANALYSIS OF PILE VERTICAL FORCE DATA
2510   GOSUB    ALINE       5000
2520   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILED05M
2540   GOSUB    ALINE       6000
2550   GOSUB    ALINE       5500
2600   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILEFORC
2620   GOSUB    ALINE       5000
2630   IFVECTOR   2    SEQCHAN  NUMBER LESSTHAN  ,    60  GO TO      2600
2632   REWIND    FILE  SEQINPUT
2634   SKIPHEADER
2640   COMMENT  ;  START OF ANALYSIS OF HORIZONTIAL DISP DATA FOR PILE
2710   GOSUB    ALINE       5000
2720   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILECAPH
2730   GOSUB    ALINE       6000
2740   GOSUB    ALINE       5500
2750   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILEHORZ
2760   GOSUB    ALINE       5000
2770   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       18  GO TO      2750
2780   REWIND    FILE  SEQINPUT
2790   SKIPHEADER
2800   COMMENT  ; START  ANALYSIS OF PILE TRANSVERSE DISP DATA
2810   GOSUB    ALINE       5000
2820   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILECAPT
2830   GOSUB    ALINE       5000
2840   GOSUB    ALINE       5500
2845   REWIND    FILE  SEQINPUT
2848   SKIPHEADER
2850   READTRACE  TO    VECTOR            2 UNTILL GEOMLINE EQUALS PILETRAN
2860   GOSUB    ALINE       5000
2870   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       21  GO TO      2850
4900   END      ;  TRANSFER CONTROL TO .CMD FILE OR PREVIOUS INPUT  ----->>
4999   COMMENT  ; ------------------SUBROUTINES---------------------------
5000   COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
5150   ECHO OFF
5100   READTRACE  TO    VECTOR            1 UNTILL GEOMLINE EQUALS INFORCE1
5210   REWIND    FILE  SEQINPUT
5220   SKIPHEADER
5300   SPECTRA  OF DATA VECTOR        1
5350   ECHO ON
5400   RETURN
5500   COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
```

```
560    5550    ECHO OFF
570    5600    MOVEVECTOR            2     TO VECTOR          1        0
580    5700    GO TO     ALINE      5300
590    5000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
600    5050    ECHO OFF
610    5100    MOTION  CONVERT VECTOR           2
620    5500    CROSSPECTRA FOR VECTORS          1   AND           2
630    5600    TRANSFER              1   350.0        2
640    5700    COMMENT PLOT   1      1  5.0000  50.0000   0.0000 10.0000   0.3000  130.00
650    5710    LISTRANS          1   2  5.000    5.000                14
660    5750    ECHO ON
670    5800    RETURN
680    7000    ENDANALYSIS  ;    VERTICAL PILE DISP AND FORCE DATA
```

```
VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS
VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS
VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS

                            CCCC   III   V   V  M   M  W   W   OOO
                           C        I    V   V  MM MM  W   W  O   O
                           C        I    V   V  M M M  W   W  O   O
                           C        I    V   V  M   M  W   W  O   O
                           C        I    V   V  M   M  W W W  O   O
                           C        I     V V   M   M  WW WW  O   O
                            CCCC   III     V    M   M  W   W   OOO

      TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA      222222      000000      222222      000000
      TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA      222222      000000      222222      000000
          TT      RR      RR  NN      NN  AA      AA  22      22  00      00  22      22  00      00
          TT      RR      RR  NN      NN  AA      AA  22      22  00      00  22      22  00      00
          TT      RR      RR  NNNN    NN  AA      AA          22  00    0000          22  00    0000
          TT      RR      RR  NNNN    NN  AA      AA          22  00    0000          22  00    0000
          TT      RRRRRRRR    NN  NN  NN  AA      AA        22    00  00  00        22    00  00  00
          TT      RRRRRRRR    NN  NN  NN  AA      AA        22    00  00  00        22    00  00  00
          TT      RR  RR      NN    NNNN  AAAAAAAAAA      22      0000    00      22      0000    00
          TT      RR  RR      NN    NNNN  AAAAAAAAAA      22      0000    00      22      0000    00
          TT      RR    RR    NN      NN  AA      AA    22        00      00    22        00      00    ....
          TT      RR    RR    NN      NN  AA      AA    22        00      00    22        00      00    ....
          TT      RR      RR  NN      NN  AA      AA  2222222222    000000    2222222222    000000      ....
          TT      RR      RR  NN      NN  AA      AA  2222222222    000000    2222222222    000000      ....

      EEEEEEEEEE    CCCCCCCC      000000      ;;;;      11
      EEEEEEEEEE    CCCCCCCC      000000      ;;;;      11
      EE          CC          00      00      ;;;;    1111
      EE          CC          00      00      ;;;;    1111
      EE          CC          00      00                11
      EE          CC          00      00                11
      EEEEEEEE    CC          00      00      ;;;;      11
      EEEEEEEE    CC          00      00      ;;;;      11
      EE          CC          00      00      ;;;;      11
      EE          CC          00      00      ;;;;      11
      EE          CC          00      00        ;;      11
      EE          CC          00      00        ;;      11
      EEEEEEEEEE    CCCCCCCC      000000      ;;      111111
      EEEEEEEEEE    CCCCCCCC      000000      ;;      111111

                            CCCC   III   V   V  M   M  W   W   OOO
                           C        I    V   V  MM MM  W   W  O   O
                           C        I    V   V  M M M  W   W  O   O
                           C        I    V   V  M   M  W   W  O   O
                           C        I    V   V  M   M  W W W  O   O
                           C        I     V V   M   M  WW WW  O   O
                            CCCC   III     V    M   M  W   W   OOO

VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS
VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS
VAX/VMS  CIVMWO     TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:00    _DRA1:[DCASS]TRVA2020.ECO;1  VAX/VMS
```

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DCASS5
DATA COLLECTION AND ANALYSIS SOFTWARE SYSTEM 5
DEC VAX VERSION A ; NOVEMBER 6, 1981 ; GORDON L. MUSTER II

[ ! ] REVISED BY GLM ON 12/ 6/81  -  FIX SCALING OF TRANSFER

[ ! ] REVISED BY GLM ON  3/10/82  -  FIX LOSS OF GOUT TRACE
      HEADER IN LOADTRAC COMMAND, CHANGED MOVEDATA TO
      MOVEVECT AND FIX COVARIANCE , SKIPCHAN & IF COMMANDS
[ ! ] REVISED BY GLM ON  9 4/82 - FIX LISTRAN AND
      ADDED GEOMLINE TO IF COMMAND AND MADE F(VECTOR #)
      AND ADDED GOSUB,RETURN AND COMMENT COMMANDS

 #[DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5][DCASS5]

LOG OF CARD IMAGES IN COMMAND THREAD

------------------------------------------------------------------------------------------------------------
LINE#/CARD=    2/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:42 ON 12/11/82/
 1003   OPENECHO   FILE [.DCASS]TRNA2020.ECO       TO UNIT        8
------------------------------------------------------------------------------------------------------------
LINE#/CARD=    3/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:42 ON 12/11/82/
 1004   RUNTITLE   FFID=521  50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
------------------------------------------------------------------------------------------------------------
LINE#/CARD=    4/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:42 ON 12/11/82/
 1005   USERVARS          [.DCASS]TRNA2020.TXT
SETUP DATA                                                     USER
CAL,CMD,SET,TITLE                                              5A4
344        12A4
VERTSNGL.SV5  VERTICAL SINGLE PILE TEST USING WES VIBRATOR  GLM
COMENT - (20A4)
              INERTIA MASSES ATTACHED TO VIBRATOR
(SCHNAM(I),I=  1, 16 ) - (16(A4,1X))
IVF4 AP21 AP20 AP19 AP1V VP8V AP2V AP3V AP4V AP7V AP1H VP8T AP2H AP3H AP4H AP7H
(SCHNAM(I),I= 17, 32 ) - (16(A4,1X))
AP1T VP8H AP2T AP3T AP4T V16V V10V V11V VP6V VP9V V14V V13V V15V V13H V11H VP5T
(SCHNAM(I),I= 33, 48 ) - (16(A4,1X))
VP9T V14H V13T V13H VP6H VP9H V14T V13T V15T PIF0 PIF1 PIF2 PIF3 PIF4 PIF7 PIF9
(SCHNAM(I),I= 49, 64 ) - (16(A4,1X))
AIF4 VP2V VP2T VP2H VP3V VP3T VP3H V17V VP5T VP5H AIF5 AIF6
DCASS4 CALIBRATION DATA FOR
VERTSNGL.SV5  VERTICAL SINGLE PILE TEST USING WES VIBRATOR  GLM
              INERTIA MASSES ATTACHED TO VIBRATOR
*************************************************************************************
/ S ****/    C     /I / I /N/          /        /         /         /
/ C **I*/    H     /S / C /D/   CALCO  /  CALCO  /  CALCO  /  CALCO  /  SCAL
/ H **C*/    N     /C / F /E/          /        /         /         /
/ N **H*/    U     /D / I /3/ (1,ICHN) / (2,ICHN) / (3,ICHN) / (4,ICHN) / (ICHN)
/ A **N*/    N     /R / L / /          /        /         /         /
/ N ****/    I     /O / T / /          /        /         /         /
-------------------------------------------------------------------------------------

IVF4   1  NEWTONS  1    0 00.000000E+000.48438E-030.84391E+000.0000E+000.11241E-03
AP21   2  MM/SEC^2  2    0 00.312500E-040.48438E-030.99670E+000.0000E+00-.10014E-03
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AP20  3 MM/SEC^2  3   0 00.625000E-040.48438E-030.99347E+000.0000E+000.10034E-03
AP19  4 MM/SEC^2  4   0 00.937500E-040.48438E-030.99473E+000.0000E+00-.10146E-03
AP1V  5 MM/SEC^2  5   0 00.125000E-030.48438E-030.10083E+010.0000E+000.10167E-03
VP8V  6   MM/SEC  6   0 00.156250E-030.48438E-030.99523E+000.0000E+00-.46398E-01
AP2V  7 MM/SEC^2  7   0 00.187500E-030.48438E-030.99397E+000.0000E+000.10034E-03
AP3V  8 MM/SEC^2  8   0 00.218750E-030.48438E-030.99097E+000.0000E+000.10075E-03
AP4V  9 MM/SEC^2  9   0 00.250000E-030.48438E-030.99322E+000.0000E+000.10105E-03
AP7V 10 MM/SEC^2 10   0 00.281250E-030.48438E-030.93350E+000.0000E+000.11941E-03
AP1H 11 MM/SEC^2 11   0 00.312500E-030.48438E-030.99072E+000.0000E+000.10268E-03
VP8T 12   MM/SEC 12   0 00.343750E-030.48438E-030.94850E+000.0000E+00-.46398E-01
AP2H 13 MM/SEC^2 13   0 00.375000E-030.48438E-030.10002E+010.0000E+000.99732E-04
AP3H 14 MM/SEC^2 14   0 00.406250E-030.48438E-030.96185E+000.0000E+000.10003E-03
AP4H 15 MM/SEC^2 15   0 00.437500E-030.48438E-030.99473E+000.0000E+000.99932E-04
AP7H 16 MM/SEC^2 16   0 00.468750E-030.48438E-030.96287E+000.0000E+000.11941E-03
AP1T 17 MM/SEC^2 17   0 00.500000E-030.48438E-030.97689E+000.0000E+00-.10314E-03
VP8H 18   MM/SEC 18   0 00.531250E-030.48438E-030.99549E+000.0000E+00-.46398E-01
AP2T 19 MM/SEC^2 19   0 00.562500E-030.48438E-030.95989E+000.0000E+000.10065E-03
AP3T 20 MM/SEC^2 20   0 00.593750E-030.48438E-030.10509E+010.0000E+000.99932E-04
AP4T 21 MM/SEC^2 21   0 00.625000E-030.48438E-030.99774E+000.0000E+000.10319E-03
V16V 22   MM/SEC 22   0 00.656250E-030.48438E-030.10073E+010.0000E+000.37700E+00
V10V 23   MM/SEC 23   0 00.687500E-030.48438E-030.10050E+010.0000E+000.30390E+00
V11V 24   MM/SEC 24   0 00.718750E-030.48438E-030.99046E+000.0000E+000.30170E+00
VP6V 25   MM/SEC 25   0 00.750000E-030.48438E-030.10272E+010.0000E+00-.46398E-01
VP9V 26   MM/SEC 26   0 00.781250E-030.48438E-030.10567E+010.0000E+00-.25260E+00
V14V 27   MM/SEC 27   0 00.812500E-030.48438E-030.10257E+010.0000E+000.25560E+01
V13V 28   MM/SEC 28   0 00.843750E-030.48438E-030.10277E+010.0000E+000.22160E+00
V15V 29   MM/SEC 29   0 00.875000E-030.48438E-030.10504E+010.0000E+000.19470E+00
V10H 30   MM/SEC 30   0 00.906250E-030.48438E-030.24247E+010.0000E+000.25540E+00
V11H 31   MM/SEC 31   0 00.937500E-030.48438E-030.98891E+000.0000E+000.23010E+00
VP6T 32   MM/SEC 32   0 00.968750E-030.48438E-030.10149E+010.0000E+00-.46398E-01
VP9T 33   MM/SEC 33   0 00.100000E-020.48438E-030.10091E+010.0000E+00-.23570E+01
V14H 34   MM/SEC 34   0 00.103125E-020.48438E-030.10315E+010.0000E+000.36580E+00
V13H 35   MM/SEC 35   0 00.106250E-020.48438E-030.98715E+010.0000E+000.23540E+00
V15H 36   MM/SEC 36   0 00.109375E-020.48438E-030.10277E+010.0000E+000.36470E+00
VP6H 37   MM/SEC 37   0 00.112500E-040.48438E-030.10035E+010.0000E+00-.46398E-01
VP9H 38   MM/SEC 38   0 00.115625E-040.48438E-030.99521E+000.0000E+00-.22530E+01
V14T 39   MM/SEC 39   0 00.118750E-040.48438E-030.10035E+010.0000E+000.23490E+00
V13T 40   MM/SEC 40   0 00.121875E-040.48438E-030.10103E+010.0000E+000.23500E+00
V15T 41   MM/SEC 41   0 00.125000E-040.48438E-030.10125E+010.0000E+000.35300E+00
P1F0 42  NEWTONS 42   0 00.128125E-040.48438E-030.10416E+010.0000E+000.57373E-05
P1F1 43  NEWTONS 43   0 00.131250E-040.48438E-030.10093E+010.0000E+000.57326E-06
P1F2 44  NEWTONS 44   0 00.134375E-040.48438E-030.10063E+010.0000E+000.57328E-05
P1F3 45  NEWTONS 45   0 00.137500E-040.48438E-030.94584E+000.0000E+000.30515E-05
P1F4 46  NEWTONS 46   0 00.140625E-040.48438E-030.10470E+010.0000E+000.57438E-05
P1F7 47  NEWTONS 47   0 00.143750E-040.48438E-030.10060E+010.0000E+000.57168E-05
P1F9 48  NEWTONS 48   0 00.146875E-040.48438E-030.10302E+010.0000E+000.57216E-05
AIF4 49  NEWTONS 49   0 00.150000E-040.12500E-030.10000E+010.0000E+000.11241E-03
VP2V 50   MM/SEC 50   0 00.153125E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP2T 51   MM/SEC 51   0 00.156250E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP2H 52   MM/SEC 52   0 00.159375E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3V 53   MM/SEC 53   0 00.162500E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3T 54   MM/SEC 54   0 00.165625E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP3H 55   MM/SEC 55   0 00.168750E-040.12500E-030.10000E+010.0000E+00-.33478E-01
V17V 56   MM/SEC 56   0 00.171875E-040.12500E-030.10000E+010.0000E+00-.33478E-01
VP5T 57   MM/SEC 57   0 00.175000E-040.12500E-030.10000E+010.0000E+00-.33478E-01
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VP54 58   MM/SEC 58    0 00.178125E-040.12500E-030.10000E+010.0000E+00-.33478E-01
AIF5 59   NEWTONS 59   0 00.181250E-040.12500E-030.10000E+010.0000E+000.11241E-03
AIF5 60   NEWTONS 60   0 00.184375E-040.12500E-030.10000E+010.0000E+000.11241E-03
------------------------------------------------------------------------------------------
LINE#/CARD=     5/ANALYSIS CARD=   0/SHOT=     0/SEQCHAN=   0/CHANNEL=   0/COMMAND COMPLETED AT 12:54:45 ON 12/11/827
 1005   SETUPDATA  FILE C.DCASSJSETUPDAT.SV5        TO UNIT        1
```

DCASS5 GEOMETRY DATAFILE ....[.DCASS]SNGLGE01.DAT
NAME OF SITE FOR TEST IS .... UNIVERSITY OF HOUSTON, TEXAS
GLOBAL COORDINATES FOR TEST 0.00 0.00 0.00

NAME	TYPE	POSITION VECTOR IN METERS X	Y	Z	DIRECTION COSINE VECTOR X	Y	Z	PHYSICAL LINE NAMES
AP19	3	-0.76	0.00	1.52	0.00000	1.00000	0.00000	VFACSCAP*CAPSIDEV
AP20	3	-0.76	0.00	-1.52	0.00000	0.00000	1.00000	VFACSCAP*CAPSIDET
AP21	3	0.00	0.00	-2.21	0.00000	1.00000	0.00000	SGLPILE1* CAPTOPT
AP1H	3	0.00	0.00	-1.52	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PILECAPH
AP1T	3	0.00	0.00	-1.52	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PILECAPT
AP1V	3	0.00	0.00	-1.52	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PILECAPV
AP2H	3	0.00	0.00	0.61	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD0MHORZ
AP2T	3	0.00	0.00	0.61	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD0MTRAN
AP2V	3	0.00	0.00	0.61	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD0MVERT
AP3H	3	0.00	0.00	1.52	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD2MHORZ
AP3T	3	0.00	0.00	1.52	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD2MTRAN
AP3V	3	0.00	0.00	1.52	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD2MVERT
AP4H	3	0.00	0.00	3.20	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD3MHORZ
AP4T	3	0.00	0.00	3.20	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*PD3MTRAN
AP4V	3	0.00	0.00	3.20	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD3MVERT
AP7H	3	0.00	0.00	8.99	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*PD9MHORZ
AP7V	3	0.00	0.00	8.99	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*PD9MVERT
VP2V	2	1.52	0.46	8.99	0.00000	0.00000	1.00000	SGLSOUTH*SD9MVERT
VP2H	2	1.52	0.46	8.99	1.00000	0.00000	0.00000	SGLSOUTH*SS9MHORZ
VP2T	2	1.52	0.46	8.99	0.00000	1.00000	0.00000	SGLSOUTH*SD9MTRAN
VP3V	2	1.52	-0.46	3.20	0.00000	0.00000	1.00000	SGLSOUTH*SD3MVERT
VP3H	2	1.52	-0.46	3.20	1.00000	0.00000	0.00000	SGLSOUTH*SD3MHORZ
VP3T	2	1.52	-0.46	3.20	0.00000	1.00000	0.00000	SGLSOUTH*SD3MTRAN
VP5H	2	0.00	0.30	0.00	1.00000	0.00000	0.00000	SNGLEAST*SURFHORZ*EASTAT1H
VP5T	2	0.00	0.30	0.00	0.00000	1.00000	0.00000	SNGLEAST*SURFTRAN*EASTAT1T
VP6V	2	0.33	0.00	0.00	0.00000	0.00000	1.00000	SGLSOUTH*SURFVERT*SOUTHS1V
VP6H	2	0.33	0.00	0.00	1.00000	0.00000	0.00000	SGLSOUTH*SURFHORZ*SOUTHS1H
VP6T	2	0.33	0.00	0.00	0.00000	1.00000	0.00000	SGLSOUTH*SURFTRAN*SOUTHS1T
VP8V	2	0.15	0.00	-0.10	0.00000	0.00000	1.00000	SGLPILE1*PILEVERT*HEADVERT
VP8H	2	0.15	0.00	-0.10	1.00000	0.00000	0.00000	SGLPILE1*PILEHORZ*HEADHORZ
VP8T	2	0.15	0.00	-0.10	0.00000	1.00000	0.00000	SGLPILE1*PILETRAN*HEADTRAN
VP9H	2	0.76	0.00	0.00	1.00000	0.00000	0.00000	SGLSOUTH*SURFHORZ*SOUTHS2H
VP9T	2	0.76	0.00	0.00	0.00000	1.00000	0.00000	SGLSOUTH*SURFTRAN*SOUTHS2T
VP9V	2	0.75	0.00	0.00	0.00000	0.00000	1.00000	SGLSOUTH*SURFVERT*SOUTHS2V
V10H	2	0.00	0.76	0.00	1.00000	0.00000	0.00000	SGLEAST*SURFHORZ*EASTAT2H
V10V	2	0.00	0.76	0.00	0.00000	0.00000	1.00000	SGLEAST*SURFVERT*EASTAT2V
V11H	2	0.00	3.63	0.00	1.00000	0.00000	0.00000	SGLEAST*SURFHORZ*EASTAT3H
V11V	2	0.00	3.63	0.00	0.00000	0.00000	1.00000	SGLEAST*SURFVERT*EASTAT3V

```
* V13H *  2 *     5.00*     0.00*      0.00* 1.00000* 0.00000* 0.00000* SGLEAST*SURFHORZ*SOUTHS4H*
* V13T *  2 *     5.00*     0.00*      0.00* 0.00000* 1.00000* 0.00000* SGLEAST*SURFTRAN*SOUTHS4T*
* V13V *  2 *     5.00*     0.00*      0.00* 0.00000* 0.00000* 1.00000* SGLEAST*SURFVERT*SOUTHS4V*
* V14H *  2 *     1.42*     0.00*      0.00* 1.00000* 0.00000* 0.00000*SGLSOUTH*SURFHORZ*SOUTHS3H*
* V14T *  2 *     1.42*     0.00*      0.00* 0.00000* 1.00000* 0.00000*SGLSOUTH*SURFTRAN*SOUTHS3T*
* V14V *  2 *     1.42*     0.00*      0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS3V*
* V15H *  2 *     6.07*     0.00*      0.00* 1.00000* 0.00000* 0.00000*SGLSOUTH*SURFHORZ*SOUTHS5H*
* V15T *  2 *     6.07*     0.00*      0.00* 0.00000* 1.00000* 0.00000*SGLSOUTH*SURFTRAN*SOUTHS5T*
* V15V *  2 *     6.37*     0.00*      0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS5V*
* V15V *  2 *    12.17*     0.00*      0.00* 0.00000* 0.00000* 1.00000*SGLSOUTH*SURFVERT*SOUTHS5V*
* V17V *  2 *     0.00*     0.30*      0.00* 0.00000* 0.00000* 1.00000* SGLEAST*SURFVERT*EASTATIV*
* PIF0 *  1 *     0.00*     0.00*      0.51* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE005M*
* PIF1 *  1 *     0.00*     0.00*      2.03* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE020M*
* PIF2 *  1 *     0.00*     0.00*      3.56* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE035M*
* PIF3 *  1 *     0.00*     0.00*      5.08* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE051M*
* PIF4 *  1 *     0.00*     0.00*      5.61* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE056M*
* PIF7 *  1 *     0.00*     0.00*     11.18* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE112M*
* PIF9 *  1 *     0.00*     0.00*     13.01* 0.00000* 0.00000* 1.00000*SGLPILE1*PILEFORC*PILE130M*
* INF4 *  1 *     0.00*     0.00*     -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE1*
* AIF1 *  1 *     0.00*     0.00*     -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE2*
* AIF5 *  1 *     0.00*     0.00*     -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE3*
* AIF6 *  1 *     0.00*     0.00*     -2.21* 0.00000* 0.00000* 1.00000*SGLPILE1* INFORCE*INFORCE4*
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=    6/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:45 ON 12/11/82/
 1007   GEOMDATA   FILE [.DCASS]SNGLGE01.DAT      TO UNIT       1
```

```
DESCRIPTION OF INPUT REEL
      INPUT  REEL NAME.................................... CIV971
      INPUT  REEL DENSITY.................................      1600
      FORMAT  NAME........................................ SINO
      LINE      NAME......................................
      NUMBER OF DATA TRACES PER ENSEMBLE .................        48
      NUMBER OF AUX  TRACES PER ENSEMBLE .................        12
      NUMBER OF      TRACES PER ENSEMBLE .................        50
      SAMPLE INTERVAL IN USEC FOR REEL  FILE .............      4000
      SAMPLES PER DATA TRACE  FOR REEL  FILE .............      8192
      NUMBER OF SHOTS ....................................        22
      SHOT          # AT START OF REEL ...................      2001
      SHOT          # AT  END  OF REEL ...................      2022
      NUMBER OF ENSEMBLES ................................        22
      IF RAW DATA IS STACKED = 1 / IF NOT = 0 ............         0
      NUMBER OF RECORDS IN REEL HEADER ...................         0
      NUMBER OF BYTES IN TRACE HEADER.....................       256
      NUMBER OF BYTES ON REEL.............................  43591680
      NUMBER OF BYTES   PER TRACE ........................     33024
      NUMBER OF BYTES   PER ENSEMBLE .....................   1981440
      NUMBER OF TRACES ON THE REEL .......................      1320

CHANNEL (FFID) ORDER ON STORAGE MEDIA

SEQ #  1-12
  49  50  51  52  53  54  55  56  57  58  59  60

SEQ # 13-24
   1   2   3   4   5   6   7   8   9  10  11  12

SEQ # 25-36
  13  14  15  16  17  18  19  20  21  22  23  24

SEQ # 37-48
  25  26  27  28  29  30  31  32  33  34  35  36

SEQ # 49-60
  37  38  39  40  41  42  43  44  45  46  47  48

SEQ # 61-64
   0   0   0   0
------------------------------------------------
```

OUTPUT FILE VARIABLES

```
SETUP    FILE NAME......................... [.DCASS]SETUPDAT.SV5
CALB     FILE NAME......................... [.DCASS]CAL3VERT.DAT
GEOMETRY FILE NAME......................... [.DCASS]SNGLGEO1.DAT
OUTPUT   FILE NAME.......................          SHOT2020
DEFAULT OUTPUT FILE NAME................. [.DCASS]SHOT2020.SV5
STARTING KEY VALUE...................................   2020
STARTING SHOT # ON REEL          TO OUTPUT.........     2020
ENDING   SHOT # ON REEL          TO OUTPUT.........     2020
NUMBER OF SEQUENTIAL ENSEMBLES.......................      1
NUMBER OF NON-ZERO DATA POINTS.......................   7500
FIRST RECORD  # ON REEL          TO OUTPUT.........     1141
RECORD SIZE IN LONGWORDS         TO OUTPUT.........     1024
NUMBER OF RECORDS IN OUTPUT FILE HEADER..............      1
NUMBER OF RECORDS IN OUTPUT TRACE HEADER.............      1
NUMBER OF RECORDS IN OUTPUT TRACE DATA BLOCK.........      9
NUMBER OF RECORDS IN OUTPUT ENSEMBLE.................    541
NUMBER OF RECORDS IN OUTPUT FILE.....................    542
NUMBER OF BYTES   IN OUTPUT FILE.....................2221032
NUMBER OF TRACES  IN OUTPUT FILE.....................     60

FLOATING POINT DATA IN DCASS5 FILE HEADER

WINDOW (2) MEAN SQUARE VALUE ....................  0.9375015+00
SAMPLE RATE     IN SECONDS ......................  4.000000E-03
SEGMENT LENGTH IN SECONDS .......................  3.275800E+01
FFT FREQ  RESOLUTION IN HERTZ ...................  3.051758E-02
FFT FREQ  RESOLUTION IN RAD/SEC .................  1.917476E-01
AVE FREQ  RESOLUTION IN HERTZ ...................  1.525879E-01
AVE FREQ  RESOLUTION IN RAD/SEC .................  9.587379E-01
NYQUIST     FREQUENCY IN HERTZ ..................  1.250000E+02
NYQUIST     FREQUENCY IN RAD/SEC ................  7.853981E+02

INTEGER DATA IN DCASS5 FILE HEADER

NVCHAN ; NUMBER OF VIRTUAL MEMORY CHANNELS......        4
NDATAT ; NUMBER OF DATA POINTS ON TAPE..........     8192
NDATA  ; NUMBER OF NON-ZERO DATA POINTS.........     7500
R      ; WHERE N = R**2 ........................       13
N      ; FFT SIZE ..............................     8192
ND2P1  ; NUMBER OF RAW SPECTRAL ESTIMATES.......     4097
NUSEG  ; NUMBER OF SEGMENTS TO USE FOR STATS....        1
NFSEG  ; NUMBER OF SEGMENTS TO AVERAGE..........        1
LFAVE  ; NFAVE = LFAVE*2 + 1 ...................        2
NFAVE  ; NUMBER OF FREQ COMPONENTS TO AVE.......        5
NAVEF  ; NUMBER OF FINAL SPECTRAL ESTIMATES.....      820
IW     ; WINDOW INDEX...........................        2
NDOF   ; NUMBER OF DEGREES OF FREEDOM...........       10
```

```
VIRTUAL MEMORY POINTERS..................................

IG11   = ( NVCHN - 2 )*( NDATAT + 2 ) + 1........      16389
IG22   = IG11 + NAVEF + 1........................      17210
IQ12   = IG22 + NAVEF + 1........................      18031
IC12   = IQ12 + NAVEF + 1........................      18852
IP12   = IC12 + NAVEF + 1 .......................      19673
IG12   = IP12 + NAVEF + 1 .......................      20494
IH12   = IG12 + NAVEF + 1 ......... .............      21315
ICOHR  = IH12 + NAVEF + 1........................      22135

DCASS) TRACE HEADER POINTERS.............................

IFFID  (FIELD RECORD NUMBER) ....................          3
IICHAN (CHANNEL NUMBER) .........................          4
INSAMP (NUMBER OF POINTS) .......................         45
IIRATE (SAMPLE RATE IN USEC) ....................         47
ILASTR (LAST TRACE KEY:0 IF NOT;1 IF LAST) .....         48
IISEQN (SEQUENTIAL NUMBER) ......................         49
IITYPE (TRACE TYPE KEY:0 IF DATA;1 IF AUX) .....         50
IISHOT (SHOT NUMBER) ............................         51
IYEAR  (YEAR  OF DEMUX) .........................         52
IMONTH (MONTH OF DEMUX) .........................         53
IDAY   (DAY   OF DEMUX) .........................         54
.........................................................
INAM   = LABB/4 + 1 .............................         65
ICALB  = INAM   + 1 .............................         66
ICALCO = ICALB  + 1 .............................         67
ISCALC = ICALCO + 4 .............................         71
IGFX   = ISCALC + 1 .............................         72
IGZERO = IGFX   + 1 .............................         73
IISCRO = IGZERO + 1 .............................         74
IICFLT = IISCRO + 1 .............................         75
IINDEG = IICFLT + 1 .............................         76
ICUNT  = IINDEG + 1 .............................         77
IJSEOF = ICUNT  + 2 .............................         79
IISKPC = IJSEOF + 1 .............................         80
IIZTYP = IISKPC + 1 .............................         81
IZPOS  = IIZTYP + 1 .............................         82
IZDIR  = IZPOS  + 3 .............................         85
IGLINE = IZDIR  + 3 .............................         88
```

```
ISTAT  = 129 .....................................     129
ISTATA = RANDSEG + ISTAT .........................     137
IABMIN = ISTATA  + 1 .............................     145
IABMAX = IABMIN  + 1 .............................     146
IIABMN = IABMAX  + 1 .............................     147
IIABMX = IIABMN  + 1 .............................     148
IPDFMX = IIABMX  + 1 .............................     149
IPDFDX = IPDFMX  + 1 .............................     150
IREMV  = IPDFDX  + 1 .............................     151
IKCLAS = IREMV   + 1 .............................     152
IPDF   = IKCLAS  + 1 .............................     153
IGVAR  = NCLASS  + IPDF + 2 ......................     281
IGVARA = NFSEG   + IGVAR .........................     282
IGMAX  = IGVARA  + 1 .............................     283
IGMXHZ = IGMAX   + 1 .............................     284
IMOM   = IGMXHZ  + 1 .............................     285
IWAVE  = IMOM    + 4 .............................     289
ICOVAR = IWAVE   + 8 .............................     297
ICOVRA = ICOVAR + NOSEG ..........................     298
IG12VR = ICOVRA + 1 ..............................     299
IG12VA = IG12VR + NFSEG ..........................     300
IG12MX = IG12VA + 1 ..............................     301
IG12HZ = IG12MX + 1 ..............................     302
IP12MX = IG12HZ + 1 ..............................     303
IP12HZ = IP12MX + 1 ..............................     304
IH12MX = IP12HZ + 1 ..............................     305
IH12HZ = IH12MX + 1 ..............................     306
ICOHMX = IH12HZ + 1 ..............................     307
ICOHHZ = ICOHMX + 1 ..............................     308
IRTYPE = ICOHHZ + 1 ..............................     309
IRNLAS = IRTYPE + 1 ..............................     310
IR12MX = IRNLAS + 1 ..............................     311
IR12DT = IR12MX + 1 ..............................     312
IRTIMX = IR12DT + 1 ..............................     313
IRTIMN = IRTIMX + 1 ..............................     314
IRSTRT = IRTIMN + 1 ..............................     315
IEND   = IRSTRT + 1 ..............................     316
..........................................................

-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=    7/ANALYSIS CARD=  0/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:47 ON 12/11/82/
 1010   OPENDATA   FILE [.DCASS]SHOT2020.FFT      TO UNIT        9
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=    8/ANALYSIS CARD=  7/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:47 ON 12/11/82/
 1045   OPENLIST   FILE [.DCASS]PILE2020.TRN      ON UNIT       14
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=    9/ANALYSIS CARD= -1/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
 3000   ENDANALYSIS  ;     VERTICAL PILE DISP AND FORCE DATA
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=   10/ANALYSIS CARD=  1/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
  999   COMMENT  ;  ANALYSIS OF PILE DATA FOR SINGLE PILE TEST
```

```
***************************************************************************************
SET TITLE........................  VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS4 USER NAME.................GLM
SET - .SVD COMMENTS..............                INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004   RUNTITLE   FFID=521  50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000   ENDANALYSIS  ;     VERTICAL PILE DISP AND FORCE DATA
SHOT =          0  SEQNO =          0  CHAN =        0
 999   COMMENT  ;  ANALYSIS OF PILE DATA FOR SINGLE PILE TEST
1000   LISTANALYSIS      TO UNIT         8
1500   COMMENT  ;  ANALYSIS OF VERTICAL DATA
1500   GOSUB    ALINE       5000
1600   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILECAPV
1800   GOSUB    ALINE       6000
1900   GOSUB    ALINE       5500
2100   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEVERT
2200   GOSUB    ALINE       6000
2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        10  GO TO       2000
2350   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILE005M
2370   GOSUB    ALINE       6000
2310   REWIND    FILE   SEQINPUT
2320   SKIPHEADER
2410   COMMENT  ; START  ANALYSIS OF PILE VERTICAL FORCE DATA
2510   GOSUB    ALINE       5000
2520   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILE005M
2540   GOSUB    ALINE       6000
2550   GOSUB    ALINE       5500
2500   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEFORC
2520   GOSUB    ALINE       6000
2530   IFVECTOR   2    SEQCHAN  NUMBER LESSTHAN        50  GO TO       2600
2532   REWIND    FILE   SEQINPUT
2534   SKIPHEADER
2540   COMMENT  ;  START OF ANALYSIS OF HORIZONTIAL DISP DATA FOR PILE
2710   GOSUB    ALINE       5000
2720   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILECAPH
2730   GOSUB    ALINE       6000
2740,  GOSUB    ALINE       5500
2750   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEHORZ
2760   GOSUB    ALINE       6000
2770   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        18  GO TO       2750
2780   REWIND    FILE   SEQINPUT
2790   SKIPHEADER
2800   COMMENT  ; START  ANALYSIS OF PILE TRANSVERSE DISP DATA
2810   GOSUB    ALINE       5000
2820   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILECAPT
2830   GOSUB    ALINE       6000
2840   GOSUB    ALINE       5500
2845   REWIND    FILE   SEQINPUT
2848   SKIPHEADER
2850   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILETRAN
2860   GOSUB    ALINE       6000
2870   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21  GO TO       2850
4900   END       ;  TRANSFER CONTROL TO .CMD FILE OR PREVIOUS INPUT  ----->>
4999   COMMENT  ; ------------------SUBROUTINUES------------------------------
5000   COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
5130   ECHO OFF
```

```
5100   READTRACE  TO   VECTOR          1 UNTILL GEOMLINE EQUALS INFORCE1
5210   REWIND    FILE  STRINPUT
5220   SKIPHEADER
5300   SPECTRA  OF DATA VECTOR          1
5350   ECHO ON
5400   RETURN
5500   COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
5550   ECHO OFF
5600   MOVEVECTOR             2       TO VECTOR          1        0
5700   GO TO    ALINE        5300
6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
6050   ECHO OFF
6100   MOTION  CONVERT VECTOR          2
6500   CROSSPECTRA FOR VECTORS         1  AND          2
6600   TRANSFER               1   350.0        2
6700   COMMENT PLOT   1       1  5.0000 50.0000  0.9000 10.0000  0.0000  130.00
6710   LISTRANS            1   2   0.000   0.000  68.000        14        1        4
6750   ECHO ON
6800   RETURN
9000   ENDANALYSIS  ;     VERTICAL PILE DISP AND FORCE DATA
---------------------------------------------------------------------------------------------
LINE#/CARD=   11/ANALYSIS CARD=  2/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
 1000   LISTANALYSIS      TO UNIT          8
---------------------------------------------------------------------------------------------
LINE#/CARD=   12/ANALYSIS CARD=  3/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
 1500   COMMENT  ;  ANALYSIS OF VERTICAL DATA
---------------------------------------------------------------------------------------------
LINE#/CARD=   13/ANALYSIS CARD= 46/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
 1500   GOSUB    ALINE        5000
---------------------------------------------------------------------------------------------
LINE#/CARD=   14/ANALYSIS CARD= 47/SHOT=     0/SEQCHAN=  0/CHANNEL=  0/COMMAND COMPLETED AT 12:54:48 ON 12/11/82/
 5000   COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
---------------------------------------------------------------------------------------------
LINE#/CARD=   21/ANALYSIS CARD=  4/SHOT= 2020/SEQCHAN=  0/CHANNEL=  1/COMMAND COMPLETED AT 12:54:59 ON 12/11/82/
 5400   RETURN
---------------------------------------------------------------------------------------------
LINE#/CARD=   22/ANALYSIS CARD=  5/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:12 ON 12/11/82/
 1500   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILECAPV
---------------------------------------------------------------------------------------------
LINE#/CARD=   23/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:12 ON 12/11/82/
 1800   GOSUB    ALINE        6000
---------------------------------------------------------------------------------------------
LINE#/CARD=   24/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:12 ON 12/11/82/
 6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
---------------------------------------------------------------------------------------------
LINE#/CARD=   32/ANALYSIS CARD=  5/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:15 ON 12/11/82/
 6800   RETURN
---------------------------------------------------------------------------------------------
LINE#/CARD=   33/ANALYSIS CARD= 54/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:15 ON 12/11/82/
 1900   GOSUB    ALINE        5500
---------------------------------------------------------------------------------------------
LINE#/CARD=   34/ANALYSIS CARD= 55/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:15 ON 12/11/82/
 5500   COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
---------------------------------------------------------------------------------------------
LINE#/CARD=   40/ANALYSIS CARD=  7/SHOT= 2020/SEQCHAN= 17/CHANNEL=  5/COMMAND COMPLETED AT 12:55:15 ON 12/11/82/
```

```
6400    RETURN
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   41/ANALYSIS CARD=  8/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 12:55:17 ON 12/11/82/
2000   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEVERT
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   42/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 12:55:17 ON 12/11/82/
2200   GOSUB    ALINE       6000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   43/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 12:55:17 ON 12/11/82/
5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   51/ANALYSIS CARD=  9/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 12:55:19 ON 12/11/82/
5800   RETURN
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   52/ANALYSIS CARD=  7/SHOT= 2020/SEQCHAN= 18/CHANNEL=  6/COMMAND COMPLETED AT 12:55:19 ON 12/11/82/
2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   53/ANALYSIS CARD=  8/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 12:55:20 ON 12/11/82/
2000   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEVERT
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   54/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 12:55:20 ON 12/11/82/
2200   GOSUB    ALINE       6000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   55/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 12:55:20 ON 12/11/82/
5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   63/ANALYSIS CARD=  9/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 12:55:23 ON 12/11/82/
5800   RETURN
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   64/ANALYSIS CARD=  7/SHOT= 2020/SEQCHAN= 19/CHANNEL=  7/COMMAND COMPLETED AT 12:55:23 ON 12/11/82/
2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   65/ANALYSIS CARD=  8/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 12:55:23 ON 12/11/82/
2000   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEVERT
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   66/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 12:55:23 ON 12/11/82/
2200   GOSUB    ALINE       6000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   67/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 12:55:23 ON 12/11/82/
5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   75/ANALYSIS CARD=  9/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 12:55:25 ON 12/11/82/
5800   RETURN
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   76/ANALYSIS CARD=  7/SHOT= 2020/SEQCHAN= 20/CHANNEL=  8/COMMAND COMPLETED AT 12:55:25 ON 12/11/82/
2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   77/ANALYSIS CARD=  8/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 12:55:27 ON 12/11/82/
2000   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEVERT
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   78/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 12:55:27 ON 12/11/82/
2200   GOSUB    ALINE       6000
---------------------------------------------------------------------------------------------------------------
LINE#/CARD=   79/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 12:55:27 ON 12/11/82/
5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
```

```
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   87/ANALYSIS CARD=  9/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 12:55:30 ON 12/11/82/
 5800   RETURN
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   88/ANALYSIS CARD=  7/SHOT= 2020/SEQCHAN= 21/CHANNEL=  9/COMMAND COMPLETED AT 12:55:30 ON 12/11/82/
 2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   89/ANALYSIS CARD=  8/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 12:55:30 ON 12/11/82/
 2000   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEVERT
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   90/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 12:55:30 ON 12/11/82/
 2200   GOSUB    ALINE      6000
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   91/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 12:55:31 ON 12/11/82/
 6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-----------------------------------------------------------------------------------------------------
LINE#/CARD=   99/ANALYSIS CARD=  9/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 12:55:33 ON 12/11/82/
 5800   RETURN
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  100/ANALYSIS CARD= 10/SHOT= 2020/SEQCHAN= 22/CHANNEL= 10/COMMAND COMPLETED AT 12:55:33 ON 12/11/82/
 2300   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       10  GO TO      2000
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  101/ANALYSIS CARD= 11/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:55:57 ON 12/11/82/
 2350   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILE005M
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  102/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:55:57 ON 12/11/82/
 2370   GOSUB    ALINE      6000
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  103/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:55:57 ON 12/11/82/
 6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  111/ANALYSIS CARD= 12/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 5800   RETURN
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  112/ANALYSIS CARD= 13/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 2310   REWIND    FILE  SEQINPUT
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  113/ANALYSIS CARD= 14/SHOT= 2020/SEQCHAN=  0/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 2320   SKIPHEADER
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  114/ANALYSIS CARD= 15/SHOT= 2020/SEQCHAN=  0/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 2410   COMMENT  ; START  ANALYSIS OF PILE VERTICAL FORCE DATA
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  115/ANALYSIS CARD= 46/SHOT= 2020/SEQCHAN=  0/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 2510   GOSUB    ALINE      5000
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  116/ANALYSIS CARD= 47/SHOT= 2020/SEQCHAN=  0/CHANNEL= 42/COMMAND COMPLETED AT 12:56:00 ON 12/11/82/
 5000   COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  123/ANALYSIS CARD= 16/SHOT= 2020/SEQCHAN=  0/CHANNEL=  1/COMMAND COMPLETED AT 12:56:10 ON 12/11/82/
 5400   RETURN
-----------------------------------------------------------------------------------------------------
LINE#/CARD=  124/ANALYSIS CARD= 17/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:05 ON 12/11/82/
 2520   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILE005M
-----------------------------------------------------------------------------------------------------
```

```
LINE#/CARD=  125/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:05 ON 12/11/82/
 2540    GOSUB    ALINE      6000
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  126/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:05 ON 12/11/82/
 5000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  134/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:09 ON 12/11/82/
 5800    RETURN
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  135/ANALYSIS CARD= 54/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:09 ON 12/11/82/
 2550    GOSUB    ALINE      5500
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  136/ANALYSIS CARD= 55/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:09 ON 12/11/82/
 5500    COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  142/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 54/CHANNEL= 42/COMMAND COMPLETED AT 12:57:10 ON 12/11/82/
 5400    RETURN
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  143/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 12:57:11 ON 12/11/82/
 2500    READTRAC  TO    VECTOR          2 UNTILL GEOMLINE EQUALS PILEFORC
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  144/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 12:57:11 ON 12/11/82/
 2520    GOSUB    ALINE      6000
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  145/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 12:57:11 ON 12/11/82/
 5000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  153/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 12:57:14 ON 12/11/82/
 5800    RETURN
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  154/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 55/CHANNEL= 43/COMMAND COMPLETED AT 12:57:14 ON 12/11/82/
 2530    IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN      50   GO TO      2600
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  155/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 55/CHANNEL= 44/COMMAND COMPLETED AT 12:57:14 ON 12/11/82/
 2600    READTRACE  TO    VECTOR         2 UNTILL GEOMLINE EQUALS PILEFORC
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  156/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 12:57:14 ON 12/11/82/
 2520    GOSUB    ALINE      6000
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  157/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 55/CHANNEL= 44/COMMAND COMPLETED AT 12:57:14 ON 12/11/82/
 5000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  165/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 12:57:17 ON 12/11/82/
 5800    RETURN
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  166/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 55/CHANNEL= 44/COMMAND COMPLETED AT 12:57:17 ON 12/11/82/
 2630    IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN      50   GO TO      2600
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  167/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 12:57:18 ON 12/11/82/
 2500    READTRACE  TO    VECTOR         2 UNTILL GEOMLINE EQUALS PILEFORC
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  168/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 55/CHANNEL= 44/COMMAND COMPLETED AT 12:57:18 ON 12/11/82/
 2620    GOSUB    ALINE      6000
--------------------------------------------------------------------------------------------------------------
LINE#/CARD=  169/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 55/CHANNEL= 44/COMMAND COMPLETED AT 12:57:18 ON 12/11/82/
```

```
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  177/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 12:57:20 ON 12/11/82/
 5800   RETURN
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  178/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 56/CHANNEL= 44/COMMAND COMPLETED AT 12:57:20 ON 12/11/82/
 2630   IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN         50  GO TO       2600
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  179/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 59/CHANNEL= 46/COMMAND COMPLETED AT 12:57:22 ON 12/11/82/
 2600   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEFORC
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  180/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 58/CHANNEL= 46/COMMAND COMPLETED AT 12:57:22 ON 12/11/82/
 2620   GOSUB    ALINE        6000
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  181/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 59/CHANNEL= 46/COMMAND COMPLETED AT 12:57:22 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  189/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 58/CHANNEL= 46/COMMAND COMPLETED AT 12:57:24 ON 12/11/82/
 5800   RETURN
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  190/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 58/CHANNEL= 46/COMMAND COMPLETED AT 12:57:24 ON 12/11/82/
 2630   IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN         50  GO TO       2600
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  191/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 12:57:25 ON 12/11/82/
 2600   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEFORC
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  192/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 12:57:25 ON 12/11/82/
 2620   GOSUB    ALINE        6000
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  193/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 12:57:25 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  201/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 12:57:28 ON 12/11/82/
 5800   RETURN
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  202/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 59/CHANNEL= 47/COMMAND COMPLETED AT 12:57:29 ON 12/11/82/
 2630   IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN         60  GO TO       2600
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  203/ANALYSIS CARD= 20/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:29 ON 12/11/82/
 2600   READTRACE  TO   VECTOR           2 UNTILL GEOMLINE EQUALS PILEFORC
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  204/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:30 ON 12/11/82/
 2620   GOSUB    ALINE        6000
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  205/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:31 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  213/ANALYSIS CARD= 21/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 5800   RETURN
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  214/ANALYSIS CARD= 19/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 2630   IFVECTOR   2     SEQCHAN  NUMBER LESSTHAN         50  GO TO       2600
-------------------------------------------------------------------------------------------------------
LINE#/CARD=  215/ANALYSIS CARD= 23/SHOT= 2020/SEQCHAN= 60/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 2632   REWIND    FILE  SEQINPUT
```

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------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  216/ANALYSIS CARD= 24/SHOT= 2020/SEQCHAN=  3/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 2634    SKIPHEADER
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  217/ANALYSIS CARD= 25/SHOT= 2020/SEQCHAN=  3/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 2640    COMMENT  ;  START OF ANALYSIS OF HORIZONTIAL DISP DATA FOR PILE
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  218/ANALYSIS CARD= 45/SHOT= 2020/SEQCHAN=  3/CHANNEL= 48/COMMAND COMPLETED AT 12:57:33 ON 12/11/82/
 2710    GOSUB     ALINE       5000
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  219/ANALYSIS CARD= 47/SHOT= 2020/SEQCHAN=  3/CHANNEL= 48/COMMAND COMPLETED AT 12:57:34 ON 12/11/82/
 5000    COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  226/ANALYSIS CARD= 25/SHOT= 2020/SEQCHAN=  0/CHANNEL=  1/COMMAND COMPLETED AT 12:57:45 ON 12/11/82/
 5400    RETURN
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  227/ANALYSIS CARD= 27/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:02 ON 12/11/82/
 2720    READTRACE  TO    VECTOR          2 UNTILL GEOMLINE EQUALS PILECAPH
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  228/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:02 ON 12/11/82/
 2730    GOSUB     ALINE       6000
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  229/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:02 ON 12/11/82/
 6000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  237/ANALYSIS CARD= 28/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:05 ON 12/11/82/
 5800    RETURN
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  238/ANALYSIS CARD= 54/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:05 ON 12/11/82/
 2740    GOSUB     ALINE       5500
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  239/ANALYSIS CARD= 55/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:05 ON 12/11/82/
 5500    COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  245/ANALYSIS CARD= 29/SHOT= 2020/SEQCHAN= 23/CHANNEL= 11/COMMAND COMPLETED AT 12:58:05 ON 12/11/82/
 5400    RETURN
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  246/ANALYSIS CARD= 30/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 12:58:07 ON 12/11/82/
 2750    READTRACE  TO    VECTOR          2 UNTILL GEOMLINE EQUALS PILEHORZ
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  247/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 12:58:07 ON 12/11/82/
 2750    GOSUB     ALINE       6000
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  248/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 12:58:07 ON 12/11/82/
 6000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  256/ANALYSIS CARD= 31/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 12:58:09 ON 12/11/82/
 5800    RETURN
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  257/ANALYSIS CARD= 27/SHOT= 2020/SEQCHAN= 25/CHANNEL= 13/COMMAND COMPLETED AT 12:58:10 ON 12/11/82/
 2770    IFVECTOR   2    CHANNEL  NUMBER LESSTHAN      18  GO TO      2750
------------------------------------------------------------------------------------------------------------------
LINE#/CARD=  258/ANALYSIS CARD= 30/SHOT= 2020/SEQCHAN= 25/CHANNEL= 14/COMMAND COMPLETED AT 12:58:10 ON 12/11/82/
 2750    READTRACE  TO    VECTOR          2 UNTILL GEOMLINE EQUALS PILEHORZ
------------------------------------------------------------------------------------------------------------------
```

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LINE#/CARD=  259/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 26/CHANNEL= 14/COMMAND COMPLETED AT 12:58:10 ON 12/11/82/
 2750   GOSUB    ALINE       6000
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  260/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 26/CHANNEL= 14/COMMAND COMPLETED AT 12:58:10 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  268/ANALYSIS CARD= 31/SHOT= 2020/SEQCHAN= 26/CHANNEL= 14/COMMAND COMPLETED AT 12:58:13 ON 12/11/82/
 5800   RETURN
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  269/ANALYSIS CARD= 29/SHOT= 2020/SEQCHAN= 26/CHANNEL= 14/COMMAND COMPLETED AT 12:58:13 ON 12/11/82/
 2770   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       18  GO TO      2750
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  270/ANALYSIS CARD= 30/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 12:58:14 ON 12/11/82/
 2750   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEHORZ
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  271/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 12:58:14 ON 12/11/82/
 2750   GOSUB    ALINE       6000
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  272/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 12:58:14 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  280/ANALYSIS CARD= 31/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 12:58:17 ON 12/11/82/
 5800   RETURN
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  281/ANALYSIS CARD= 29/SHOT= 2020/SEQCHAN= 27/CHANNEL= 15/COMMAND COMPLETED AT 12:58:17 ON 12/11/82/
 2770   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       18  GO TO      2750
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  282/ANALYSIS CARD= 30/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 12:58:17 ON 12/11/82/
 2750   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEHORZ
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  283/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 12:58:17 ON 12/11/82/
 2760   GOSUB    ALINE       6000
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  284/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 12:58:18 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  292/ANALYSIS CARD= 31/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 12:58:20 ON 12/11/82/
 5800   RETURN
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  293/ANALYSIS CARD= 29/SHOT= 2020/SEQCHAN= 28/CHANNEL= 16/COMMAND COMPLETED AT 12:58:20 ON 12/11/82/
 2770   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN       18  GO TO      2750
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  294/ANALYSIS CARD= 30/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 12:58:21 ON 12/11/82/
 2750   READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILEHORZ
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  295/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 12:58:22 ON 12/11/82/
 2760   GOSUB    ALINE       6000
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  296/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 12:58:22 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  304/ANALYSIS CARD= 31/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 5800   RETURN
----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  305/ANALYSIS CARD= 32/SHOT= 2020/SEQCHAN= 30/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
```

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2770   IFVECTOR   2   CHANNEL  NUMBER LESSTHAN      19  GO TO      2750
--------------------------------------------------------------------------------------
LINE#/CARD=  306/ANALYSIS CARD= 33/SHOT= 2020/SEQCHAN= 33/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 2780   REWIND    FILE  SEQINPUT
--------------------------------------------------------------------------------------
LINE#/CARD=  307/ANALYSIS CARD= 34/SHOT= 2020/SEQCHAN=  0/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 2790   SKIPHEADER
--------------------------------------------------------------------------------------
LINE#/CARD=  308/ANALYSIS CARD= 35/SHOT= 2020/SEQCHAN=  0/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 2800   COMMENT  ; START  ANALYSIS OF PILE TRANSVERSE DISP DATA
--------------------------------------------------------------------------------------
LINE#/CARD=  309/ANALYSIS CARD= 46/SHOT= 2020/SEQCHAN=  0/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 2810   GOSUB    ALINE      5000
--------------------------------------------------------------------------------------
LINE#/CARD=  310/ANALYSIS CARD= 47/SHOT= 2020/SEQCHAN=  0/CHANNEL= 18/COMMAND COMPLETED AT 12:58:24 ON 12/11/82/
 5000   COMMENT  ;  OBTAIN INPUT FORCE , COMPUTE SPECTRA AND REWIND TO TRACE 1
--------------------------------------------------------------------------------------
LINE#/CARD=  317/ANALYSIS CARD= 36/SHOT= 2020/SEQCHAN=  0/CHANNEL=  1/COMMAND COMPLETED AT 12:58:35 ON 12/11/82/
 5400   RETURN
--------------------------------------------------------------------------------------
LINE#/CARD=  318/ANALYSIS CARD= 37/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:35 ON 12/11/82/
 2820   READTRACE  TO   VECTOR         2 UNTILL GEOMLINE EQUALS PILECAPT
--------------------------------------------------------------------------------------
LINE#/CARD=  319/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:55 ON 12/11/82/
 2830   GOSUB    ALINE      6000
--------------------------------------------------------------------------------------
LINE#/CARD=  320/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:55 ON 12/11/82/
 6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
--------------------------------------------------------------------------------------
LINE#/CARD=  328/ANALYSIS CARD= 38/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:59 ON 12/11/82/
 6800   RETURN
--------------------------------------------------------------------------------------
LINE#/CARD=  329/ANALYSIS CARD= 54/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:59 ON 12/11/82/
 2840   GOSUB    ALINE      5500
--------------------------------------------------------------------------------------
LINE#/CARD=  330/ANALYSIS CARD= 55/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:58:59 ON 12/11/82/
 5500   COMMENT  ;  PUT VECTOR 2 IN 1 AND COMPUTE SPECTRA
--------------------------------------------------------------------------------------
LINE#/CARD=  335/ANALYSIS CARD= 37/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:00 ON 12/11/82/
 5400   RETURN
--------------------------------------------------------------------------------------
LINE#/CARD=  337/ANALYSIS CARD= 40/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:00 ON 12/11/82/
 2845   REWIND    FILE  SEQINPUT
--------------------------------------------------------------------------------------
LINE#/CARD=  338/ANALYSIS CARD= 41/SHOT= 2020/SEQCHAN=  0/CHANNEL= 17/COMMAND COMPLETED AT 12:59:00 ON 12/11/82/
 2848   SKIPHEADER
--------------------------------------------------------------------------------------
LINE#/CARD=  339/ANALYSIS CARD= 42/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 12:59:19 ON 12/11/82/
 2850   READTRACE  TO   VECTOR         2 UNTILL GEOMLINE EQUALS PILETRAN
--------------------------------------------------------------------------------------
LINE#/CARD=  340/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 12:59:19 ON 12/11/82/
 2860   GOSUB    ALINE      6005
--------------------------------------------------------------------------------------
LINE#/CARD=  341/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 12:59:19 ON 12/11/82/
 6000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
```

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-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  349/ANALYSIS CARD= 43/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 12:59:22 ON 12/11/82/
 5800    RETURN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  350/ANALYSIS CARD= 41/SHOT= 2020/SEQCHAN= 24/CHANNEL= 12/COMMAND COMPLETED AT 12:59:22 ON 12/11/82/
 2870    IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21  GO TO       2850
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  351/ANALYSIS CARD= 42/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:25 ON 12/11/82/
 2850    READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILETRAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  352/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:25 ON 12/11/82/
 2850    GOSUB    ALINE       6000
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  353/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:25 ON 12/11/82/
 5000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  361/ANALYSIS CARD= 43/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:27 ON 12/11/82/
 5800    RETURN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  362/ANALYSIS CARD= 41/SHOT= 2020/SEQCHAN= 29/CHANNEL= 17/COMMAND COMPLETED AT 12:59:27 ON 12/11/82/
 2870    IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21  GO TO       2850
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  363/ANALYSIS CARD= 42/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 12:59:30 ON 12/11/82/
 2850    READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILETRAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  364/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 12:59:30 ON 12/11/82/
 2850    GOSUB    ALINE       6000
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  365/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 12:59:30 ON 12/11/82/
 6000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  373/ANALYSIS CARD= 43/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 12:59:33 ON 12/11/82/
 5800    RETURN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  374/ANALYSIS CARD= 41/SHOT= 2020/SEQCHAN= 31/CHANNEL= 19/COMMAND COMPLETED AT 12:59:34 ON 12/11/82/
 2870    IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21  GO TO       2850
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  375/ANALYSIS CARD= 42/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 12:59:34 ON 12/11/82/
 2850    READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILETRAN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  376/ANALYSIS CARD= 58/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 12:59:35 ON 12/11/82/
 2850    GOSUB    ALINE       6000
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  377/ANALYSIS CARD= 59/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 12:59:35 ON 12/11/82/
 6000    COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  385/ANALYSIS CARD= 43/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 12:59:37 ON 12/11/82/
 5800    RETURN
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  386/ANALYSIS CARD= 41/SHOT= 2020/SEQCHAN= 32/CHANNEL= 20/COMMAND COMPLETED AT 12:59:37 ON 12/11/82/
 2870    IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21  GO TO       2850
-----------------------------------------------------------------------------------------------------------------
LINE#/CARD=  387/ANALYSIS CARD= 42/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:39 ON 12/11/82/
 2850    READTRACE  TO   VECTOR          2 UNTILL GEOMLINE EQUALS PILETRAN
-----------------------------------------------------------------------------------------------------------------
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LINE#/CARD=  388/ANALYSIS CARD= 5[illegible]/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:39 ON 12/11/82/
 2860   GOSUB   ALINE      6000
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  389/ANALYSIS CARD= 5[illegible]/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:39 ON 12/11/82/
 5000   COMMENT  ; CONVERT TO DISP  AND COMPUTE AND LIST TRANSFER FUNCTION
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  397/ANALYSIS CARD= 43/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:41 ON 12/11/82/
 5800   RETURN
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  398/ANALYSIS CARD= 44/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:41 ON 12/11/82/
 2870   IFVECTOR   2    CHANNEL  NUMBER LESSTHAN        21   GO TO      2850
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  399/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:41 ON 12/11/82/
 4900   END        ;  TRANSFER CONTROL TO .CMD FILE OR PREVIOUS INPUT  ----->>
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  400/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:41 ON 12/11/82/
 2000   CLOSE   SEQINPUT
----------------------------------------------------------------------------------------------------------
LINE#/CARD=  401/ANALYSIS CARD=  0/SHOT= 2020/SEQCHAN= 33/CHANNEL= 21/COMMAND COMPLETED AT 12:59:41 ON 12/11/82/
 3300   CLOSE   SEQOUT
```

```
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
```

```
               CCCC   III   V   V  M   M  W   W  OOO
              C        I    V   V  MM MM  W   W O   O
              C        I    V   V  M M M  W   W O   O
              C        I    V   V  M   M  W   W O   O
              C        I    V   V  M   M  W W W O   O
              C        I     V V   M   M  WW WW O   O
               CCCC   III     V    M   M  W   W  OOO

PPPPPPPP   IIIIII   LL         EEEEEEEEEE   222222     000000     222222     000000
PPPPPPPP   IIIIII   LL         EEEEEEEEEE   222222     000000     222222     000000
PP      PP   II     LL         EE         22      22 00      00 22      22 00      00
PP      PP   II     LL         EE         22      22 00      00 22      22 00      00
PP      PP   II     LL         EE                 22 00    0000         22 00    0000
PP      PP   II     LL         EE                 22 00    0000         22 00    0000
PPPPPPPP     II     LL         EEEEEEEE         22   00  00  00       22   00  00  00
PPPPPPPP     II     LL         EEEEEEEE         22   00  00  00       22   00  00  00
PP           II     LL         EE             22     0000    00     22     0000    00
PP           II     LL         EE             22     0000    00     22     0000    00
PP           II     LL         EE           22       00      00   22       00      00   ....
PP           II     LL         EE           22       00      00   22       00      00   ....
PP         IIIIII   LLLLLLLLLL EEEEEEEEEE 2222222222  000000   2222222222  000000      ....
PP         IIIIII   LLLLLLLLLL EEEEEEEEEE 2222222222  000000   2222222222  000000      ....

TTTTTTTTTT  RRRRRRRR    NN      NN   ;;;;       11
TTTTTTTTTT  RRRRRRRR    NN      NN   ;;;;       11
    TT      RR      RR  NN      NN   ;;;;     1111
    TT      RR      RR  NN      NN   ;;;;     1111
    TT      RR      RR  NNNN    NN              11
    TT      RR      RR  NNNN    NN              11
    TT      RRRRRRRR    NN  NN  NN   ;;;;       11
    TT      RRRRRRRR    NN  NN  NN   ;;;;       11
    TT      RR  RR      NN    NNNN   ;;;;       11
    TT      RR  RR      NN    NNNN   ;;;;       11
    TT      RR    RR    NN      NN     ;;       11
    TT      RR    RR    NN      NN     ;;       11
    TT      RR      RR  NN      NN   ;;       111111
    TT      RR      RR  NN      NN   ;;       111111

               CCCC   III   V   V  M   M  W   W  OOO
              C        I    V   V  MM MM  W   W O   O
              C        I    V   V  M M M  W   W O   O
              C        I    V   V  M   M  W   W O   O
              C        I    V   V  M   M  W W W O   O
              C        I     V V   M   M  WW WW O   O
               CCCC   III     V    M   M  W   W  OOO
```

```
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
VAX/VMS  CIVMWO    PILE2020 11-DEC-1982 12:59   LPA0: 11-DEC-1982 13:01   _DRA1:[DCASS]PILE2020.TRN;1  VAX/VMS
```

```
TRNA2020.LOG;1                 11-DEC-1982 13:06:42.12              PAGE 1

$      SET NOVERIFY
 11-DEC-1982 12:54:35
***********************************************************************
NOTICE          NOTICE          NOTICE          NOTICE          NOTICE
***********************************************************************

            <<<PLEASE PURGE OLD FILES YOU NO LONGER NEED>>>

                          *         !          *

%DC_-W-SKPDAT, DATA RECORDS ENCOUNTERED BY SYSTEM WERE IGNORED
$ SET DEFAULT [CIVMWO]
$ SHOW SYSTEM
   VAX/VMS  PROCESSES ON       11-DEC-1982 12:54:37.02        UPTIME   3 02:44:50
  PID      PROCESS NAME        UIC  STATE PRI DIR. I/O        CPU      PAGE FLTS PH.MEM
 00010000 NULL             000,000 COM    0          0 07:57:12.70          0      0
 00010001 SWAPPER          000,000 HIB   16          0 01:27:29.72          0      3
 003F0024 IPL              325,001 LEF    4        339 00:00:33.54       2776     52
 00430023 SALSYW           300,077 LEF    4         47 00:00:03.32        381     53
 00420025 _J0B1257         250,001 CUR    4         18 00:00:01.03        162    111 B
 002A0020 SA_TAW           300,063 LEF    7        119 00:00:12.87        720     95
 00320025 ELEE7397         301,001 LEF    7       1292 00:04:14.45     132476    145
 0041002F _TTA0:           200,200 LEF    4         32 00:13:03.22       1938     92
 00010030 OPER             200,200 LEF    4        484 00:00:40.44       4297    103
 00520031 _TTD4:           300,067 LEF    4       2335 00:04:14.07     391960     92
 00700032 CIVMWO           250,001 LEF    5         86 00:03:06.01       1080     83
 005C0033 SALSSL           300,067 LEF    4       5895 00:05:13.53     496068     90
 00600034 6387KCJ          350,140 LEF    9         20 00:00:01.39        275    150
 00570035 SALHRN           300,001 LEF    8        165 00:00:14.18        401    198
 00010036 PLOTSYMB         001,004 HIB    9       8975 00:15:25.42        256     84
 00010037 PRTSYM1          001,004 HIB    8       8003 00:13:57.34         18     47 S
 00010038 HASP_TELPRO      001,011 HIB    5          1 00:00:00.12         43     80
 00010039 MONJOB2          001,004 HIB    7        179 00:00:42.48        199    100
 007F0034 6387TJ           350,137 LEF    4         53 00:00:08.80       1730     50
 00010033 ERRFMT           001,006 HIB    7        925 00:00:09.26         29     34
 0001003C OPCOM            001,004 LEF    8        582 00:00:14.29         34     43
 0001003D JOB_CONTROL      001,004 HIB    9       2791 00:01:23.57        104    100
 0001003E DRARACP          001,003 HIB   10     299157 01:09:23.51      87045    153
 0002003F LOADAP           001,004 HIB    8          2 00:00:00.13         39     33
$ MCR PIP DRA1:/FREE
DR1: HAS 49788. BLOCKS FREE, 450596. BLOCKS USED OUT OF 500384.
LARGEST CONTIGUOUS SPACE = 807. BLOCKS

$ SHOW WORKING_SET
  WORKING SET      /LIMIT= 150   /QUOTA= 600      AUTHORIZED QUOTA= 600
$ RUN/NODEBUG [.DCASS]DCASS
$ SHOW STATUS
  STATUS ON  11-DEC-1982 12:59:47.50      ELAPSED CPU :    0 00:03:33.55
  BUFF. I/O :         106     CUR. WS. :     150     OPEN FILES :            2
  DIR. I/O :         4962     PHYS. MEM. :    79     PAGE FAULTS :       14077
$ PRINT/HEADER [CIVMWO.DCASS]TRNA2020.CMD
  JOB 1958 ENTERED ON QUEUE SYS$PRINT
$ PRINT/HEADER [CIVMWO.DCASS]TRAILINE.AVL
```

* 199*	3.03550E+01*	5.74735E+02	0.540 % *	6.21564E-03	0.008 % *	1.86302E+00	34.5282	1.08146E-05	1.0000 *
* 204*	3.11279E+01*	5.28760E+02	0.458 % *	6.13611E-03	0.008 % *	1.69265E+00	39.0860	1.15998E-05	0.9999 *
* 209*	3.18909E+01*	4.58316E+02	0.344 % *	5.68555E-03	0.007 % *	1.36030E+00	44.4785	1.23913E-05	0.9999 *
* 214*	3.26533E+01*	4.03798E+02	0.267 % *	5.37133E-03	0.006 % *	1.13111E+00	50.4665	1.33017E-05	0.9999 *
* 219*	3.34167E+01*	3.75920E+02	0.232 % *	5.44129E-03	0.005 % *	1.06925E+00	57.6348	1.44391E-05	0.9999 *
* 224*	3.41797E+01*	3.63781E+02	0.217 % *	5.66450E-03	0.007 % *	1.07460E+00	66.2186	1.55703E-05	0.9999 *
* 229*	3.49426E+01*	3.52154E+02	0.203 % *	5.72287E-03	0.007 % *	1.05095E+00	75.9914	1.52499E-05	0.9999 *
* 234*	3.57056E+01*	3.25590E+02	0.174 % *	5.39454E-03	0.006 % *	9.16200E-01	85.5885	1.55619E-05	0.9998 *
* 239*	3.64685E+01*	3.04597E+02	0.152 % *	4.99317E-03	0.005 % *	7.93354E-01	96.6279	1.53855E-05	0.9998 *
* 244*	3.72314E+01*	2.99079E+02	0.146 % *	4.69447E-03	0.005 % *	7.32155E-01	107.5876	1.56959E-05	0.9998 *
* 249*	3.79944E+01*	3.15921E+02	0.163 % *	4.59751E-03	0.004 % *	7.57413E-01	118.1669	1.45515E-05	0.9998 *
* 254*	3.87573E+01*	3.25239E+02	0.174 % *	4.27144E-03	0.004 % *	7.26685E-01	126.7705	1.30919E-05	0.9998 *
* 259*	3.95203E+01*	3.32782E+02	0.181 % *	3.85978E-03	0.003 % *	6.69849E-01	133.3244	1.15981E-05	0.9999 *
* 264*	4.02832E+01*	3.21318E+02	0.169 % *	3.30804E-03	0.002 % *	5.55173E-01	138.0761	1.02788E-05	0.9999 *
* 269*	4.10461E+01*	3.38897E+02	0.188 % *	3.07952E-03	0.002 % *	5.44255E-01	142.2346	9.08649E-06	0.9999 *
* 274*	4.18091E+01*	3.62596E+02	0.215 % *	2.94709E-03	0.002 % *	5.57264E-01	145.3754	8.12729E-06	0.9999 *
* 279*	4.25720E+01*	3.65430E+02	0.218 % *	2.59028E-03	0.002 % *	5.12700E-01	147.3557	7.36180E-06	1.0000 *
* 284*	4.33350E+01*	3.55307E+02	0.207 % *	2.38715E-03	0.001 % *	4.42329E-01	149.1755	6.71844E-06	1.0000 *
* 289*	4.40979E+01*	3.26165E+02	0.174 % *	2.01803E-03	0.001 % *	3.43264E-01	150.6687	6.18706E-06	1.0000 *
* 294*	4.48508E+01*	2.98273E+02	0.146 % *	1.70574E-03	0.001 % *	2.65331E-01	152.2678	5.71859E-06	1.0000 *
* 299*	4.56238E+01*	2.95869E+02	0.143 % *	1.56389E-03	0.001 % *	2.41305E-01	153.7930	5.28565E-06	1.0000 *
* 304*	4.63867E+01*	3.20349E+02	0.168 % *	1.57105E-03	0.001 % *	2.62463E-01	155.2198	4.90412E-06	1.0000 *
* 309*	4.71497E+01*	3.21148E+02	0.169 % *	1.46930E-03	0.000 % *	2.46082E-01	156.7265	4.57509E-06	1.0000 *
* 314*	4.79126E+01*	2.39298E+02	0.094 % *	1.02743E-03	0.000 % *	1.28219E-01	158.2668	4.29341E-06	0.9999 *
* 319*	4.86755E+01*	9.19773E+01	0.014 % *	3.73300E-04	0.000 % *	1.79049E-02	159.7380	4.05826E-06	0.9998 *
* 324*	4.94385E+01*	2.40540E+01	0.001 % *	9.11598E-05	0.000 % *	1.14281E-03	159.8989	3.78725E-06	0.9987 *
* 329*	5.02014E+01*	1.69897E+01	0.000 % *	5.32158E-05	0.000 % *	5.22444E-04	160.5215	3.47053E-06	0.9913 *
* 334*	5.09644E+01*	1.60171E+01	0.000 % *	5.34504E-05	0.000 % *	4.45668E-04	163.9542	3.33102E-06	0.9964 *
* 339*	5.17273E+01*	1.48900E+01	0.000 % *	4.74979E-05	0.000 % *	3.67938E-04	161.4510	3.18212E-06	0.9951 *
* 344*	5.24902E+01*	1.51883E+01	0.000 % *	4.72003E-05	0.000 % *	3.73549E-04	162.1135	3.10497E-06	0.9983 *
* 349*	5.32532E+01*	1.71359E+01	0.000 % *	4.90192E-05	0.000 % *	4.37055E-04	164.5286	2.85399E-06	0.9954 *
* 354*	5.40161E+01*	2.27564E+01	0.001 % *	6.04788E-05	0.000 % *	7.15705E-04	163.9049	2.55008E-06	0.9943 *
* 359*	5.47790E+01*	2.38350E+01	0.001 % *	6.09718E-05	0.000 % *	7.55981E-04	166.5950	2.55159E-06	0.9947 *
* 364*	5.55420E+01*	1.73174E+01	0.000 % *	3.96027E-05	0.000 % *	3.56663E-04	168.2005	2.28046E-06	0.9944 *
* 369*	5.63049E+01*	2.36593E+01	0.001 % *	5.51108E-05	0.000 % *	6.79330E-04	169.5152	2.32706E-06	0.9980 *
* 374*	5.70679E+01*	2.33013E+01	0.001 % *	5.15015E-05	0.000 % *	6.24962E-04	169.2804	2.20711E-06	0.9972 *
* 379*	5.78308E+01*	2.97601E+01	0.001 % *	6.44938E-05	0.000 % *	9.99375E-04	169.7092	2.16367E-06	0.9968 *
* 384*	5.85937E+01*	3.45502E+01	0.002 % *	6.99698E-05	0.000 % *	1.25957E-03	168.8225	2.02208E-06	0.9975 *
* 389*	5.93567E+01*	3.76406E+01	0.002 % *	7.07103E-05	0.000 % *	1.31623E-03	168.4219	1.78135E-06	0.8992 *
* 394*	6.01196E+01*	4.84170E+01	0.004 % *	9.31882E-05	0.000 % *	2.33572E-03	167.7723	1.91054E-06	0.9853 *
* 399*	6.08826E+01*	3.84496E+01	0.002 % *	6.84518E-05	0.000 % *	1.37124E-03	170.9324	1.77853E-06	0.9980 *
* 404*	6.16455E+01*	5.04566E+01	0.004 % *	8.77818E-05	0.000 % *	2.30841E-03	168.8365	1.73794E-06	0.9983 *
* 409*	6.24084E+01*	4.71486E+01	0.004 % *	7.76835E-05	0.000 % *	1.90779E-03	170.0184	1.54559E-06	0.9975 *
* 414*	6.31714E+01*	4.67868E+01	0.004 % *	7.53542E-05	0.000 % *	1.83565E-03	170.7873	1.50795E-06	0.9967 *
* 419*	6.39343E+01*	4.54306E+01	0.003 % *	7.14532E-05	0.000 % *	1.69001E-03	170.5026	1.57009E-06	0.9966 *
* 424*	6.46973E+01*	4.83526E+01	0.004 % *	7.31727E-05	0.000 % *	1.84312E-03	170.2827	1.51100E-06	0.9974 *
* 429*	6.54602E+01*	4.74633E+01	0.004 % *	6.86307E-05	0.000 % *	1.69642E-03	169.9335	1.44393E-06	0.9972 *
* 434*	6.62231E+01*	5.32256E+01	0.005 % *	7.52393E-05	0.000 % *	2.08531E-03	169.8172	1.41143E-06	0.9969 *
* 439*	6.69861E+01*	6.07947E+01	0.006 % *	8.55010E-05	0.000 % *	2.70784E-03	169.7807	1.40482E-06	0.9978 *
* 444*	6.77490E+01*	7.38753E+01	0.009 % *	1.01014E-04	0.000 % *	3.88951E-03	170.5404	1.35591E-06	0.9983 *
******************		0.00000E+00	0.000 % *	0.00000E+00	0.000 % **				

****

************************************** 0.000 % ************ 0.000 % **

****

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSM USER NAME.................GLM
SET - .S/S COMMENTS............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004 RUNTITLE EFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 18 CHAN = 6

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-AP1V	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-VP8V	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	5.50628E-05	0.000 %	7.25230E-08	129.7142	3.30592E-03	0.1748
9	1.37329E+00	2.09925E-03	0.001 %	1.71010E-05	0.000 %	1.04221E-08	284.6323	4.53478E-03	0.3099
14	2.13623E+00	9.03653E-04	0.000 %	4.52926E-05	0.000 %	4.21759E-09	65.7307	9.90355E-03	0.0390
19	2.89917E+00	5.53410E-04	0.000 %	1.23154E-04	0.001 %	2.69425E-08	51.8099	1.57472E-01	0.5704
24	3.66211E+00	7.13707E-04	0.000 %	2.71669E-04	0.003 %	8.83573E-08	66.7161	3.32608E-01	0.7635
29	4.42505E+00	7.05548E-04	0.000 %	4.57149E-04	0.010 %	1.68014E-07	89.0660	6.45345E-01	0.9527
34	5.18799E+00	8.37867E-04	0.000 %	6.98094E-04	0.022 %	3.01984E-07	108.4555	8.24828E-01	0.9801
39	5.95093E+00	9.78894E-04	0.000 %	9.30026E-04	0.040 %	4.74308E-07	121.8436	9.49115E-01	0.9980
44	6.71387E+00	1.17014E-03	0.000 %	1.14390E-03	0.060 %	5.96186E-07	133.2273	9.74936E-01	0.9946
49	7.47681E+00	1.38469E-03	0.000 %	1.31355E-03	0.080 %	9.48179E-07	140.6798	9.48223E-01	0.9992
54	8.23975E+00	1.46211E-03	0.000 %	1.40053E-03	0.090 %	1.06750E-06	147.8282	9.57498E-01	0.9992
59	9.00269E+00	1.60034E-03	0.001 %	1.50029E-03	0.104 %	1.25181E-06	152.2316	9.37226E-01	0.9995
64	9.76562E+00	1.78234E-03	0.001 %	1.52204E-03	0.121 %	1.50755E-06	156.4517	9.09969E-01	0.9998
69	1.05286E+01	1.89905E-03	0.001 %	1.70460E-03	0.134 %	1.68817E-06	158.2119	8.97578E-01	0.9999
74	1.12913E+01	2.11759E-03	0.001 %	1.88833E-03	0.164 %	2.08510E-06	161.2237	8.91605E-01	0.9997
79	1.20544E+01	2.04560E-03	0.001 %	1.79906E-03	0.149 %	1.91917E-06	163.4057	8.79429E-01	0.9999
84	1.28174E+01	1.92588E-03	0.001 %	1.67468E-03	0.129 %	1.68197E-06	164.9745	8.69541E-01	0.9999
89	1.35803E+01	1.83122E-03	0.001 %	1.57751E-03	0.115 %	1.50651E-06	166.6042	8.61429E-01	0.9999
94	1.43433E+01	1.91977E-03	0.001 %	1.64577E-03	0.125 %	1.64769E-06	168.2174	8.57240E-01	0.9999
99	1.51062E+01	1.91393E-03	0.001 %	1.61807E-03	0.121 %	1.61505E-06	170.0181	8.45409E-01	1.0000
104	1.58691E+01	2.18742E-03	0.001 %	1.78538E-03	0.147 %	2.03572E-06	171.2626	8.16204E-01	1.0000
109	1.66321E+01	2.31797E-03	0.001 %	1.86154E-03	0.160 %	2.25035E-06	171.1318	8.03090E-01	1.0000
114	1.73950E+01	2.24892E-03	0.001 %	1.79214E-03	0.148 %	2.10190E-06	171.2218	7.96882E-01	1.0000
119	1.81580E+01	2.15024E-03	0.001 %	1.71279E-03	0.135 %	1.92069E-06	171.5180	7.96551E-01	1.0000
124	1.89209E+01	2.20061E-03	0.001 %	1.74513E-03	0.140 %	2.00280E-06	171.8214	7.93015E-01	1.0000
129	1.96838E+01	2.36329E-03	0.001 %	1.86644E-03	0.161 %	2.30038E-06	172.3528	7.89761E-01	1.0000
134	2.04468E+01	2.55972E-03	0.001 %	2.04003E-03	0.192 %	2.72328E-06	172.9901	7.96959E-01	1.0000
139	2.12097E+01	2.83660E-03	0.002 %	2.22435E-03	0.228 %	3.29057E-06	173.0712	7.84150E-01	1.0000
144	2.19727E+01	3.14855E-03	0.002 %	2.44789E-03	0.275 %	4.01950E-06	173.1728	7.77463E-01	1.0000
149	2.27356E+01	3.37516E-03	0.002 %	2.62231E-03	0.317 %	4.61717E-06	173.3739	7.76712E-01	1.0000
154	2.34985E+01	3.76531E-03	0.003 %	2.91799E-03	0.392 %	5.73000E-06	173.7903	7.74966E-01	1.0000
159	2.42615E+01	4.10030E-03	0.004 %	3.16760E-03	0.462 %	6.77354E-06	174.2181	7.72530E-01	1.0000
164	2.50244E+01	3.96571E-03	0.003 %	3.04734E-03	0.428 %	6.30249E-06	174.4579	7.68423E-01	1.0000
169	2.57874E+01	4.38653E-03	0.004 %	3.35054E-03	0.517 %	7.66503E-06	174.7254	7.53806E-01	1.0000
174	2.65503E+01	4.80307E-03	0.005 %	3.65473E-03	0.615 %	9.15481E-06	174.9374	7.50923E-01	1.0000
179	2.73132E+01	5.22219E-03	0.006 %	3.96203E-03	0.723 %	1.07905E-05	174.8390	7.58700E-01	1.0000
184	2.80762E+01	5.39213E-03	0.006 %	4.10601E-03	0.777 %	1.15463E-05	174.9030	7.61481E-01	1.0000
189	2.88391E+01	5.71022E-03	0.007 %	4.36151E-03	0.877 %	1.29885E-05	175.3754	7.63808E-01	1.0000
194	2.96020E+01	5.98804E-03	0.008 %	4.56930E-03	0.962 %	1.42692E-05	175.7135	7.63063E-01	1.0000

199	3.03653E+01	6.21564E-03	0.003 %	4.72308E-03	1.028 %	1.53102E-05	176.1394	7.59869E-01	1.0000
204	3.11279E+01	6.13611E-03	0.008 %	4.64634E-03	0.995 %	1.48587E-05	176.3613	7.57212E-01	1.0000
209	3.18909E+01	5.68553E-03	0.007 %	4.29033E-03	0.843 %	1.27211E-05	176.4580	7.54614E-01	1.0000
214	3.26539E+01	5.37138E-03	0.006 %	4.04398E-03	0.754 %	1.13283E-05	176.5620	7.52876E-01	1.0000
219	3.34167E+01	5.44128E-03	0.006 %	4.09472E-03	0.773 %	1.16197E-05	176.7207	7.52528E-01	1.0000
224	3.41797E+01	5.66450E-03	0.007 %	4.25811E-03	0.835 %	1.25791E-05	176.8605	7.51718E-01	1.0000
229	3.49425E+01	5.72287E-03	0.007 %	4.30146E-03	0.853 %	1.28381E-05	177.0725	7.51627E-01	1.0000
234	3.57055E+01	5.39458E-03	0.006 %	4.05059E-03	0.755 %	1.13953E-05	177.4050	7.50863E-01	1.0000
239	3.64685E+01	4.99317E-03	0.005 %	3.74037E-03	0.645 %	9.74005E-06	177.8880	7.49096E-01	1.0000
244	3.72314E+01	4.69447E-03	0.005 %	3.49231E-03	0.562 %	8.55005E-06	178.0538	7.43921E-01	1.0000
249	3.79944E+01	4.59751E-03	0.004 %	3.39915E-03	0.532 %	8.15013E-06	178.0443	7.39348E-01	1.0000
254	3.87573E+01	4.27144E-03	0.004 %	3.14502E-03	0.456 %	7.00595E-06	177.9541	7.36290E-01	1.0000
259	3.95203E+01	3.85978E-03	0.003 %	2.83712E-03	0.371 %	5.71098E-06	177.8327	7.35048E-01	1.0000
264	4.02832E+01	3.30904E-03	0.002 %	2.43095E-03	0.272 %	4.19387E-06	177.7257	7.34862E-01	1.0000
269	4.10461E+01	3.07952E-03	0.002 %	2.26484E-03	0.236 %	3.63733E-06	177.7145	7.35452E-01	1.0000
274	4.18091E+01	2.94705E-03	0.002 %	2.17054E-03	0.217 %	3.33601E-06	177.8405	7.36512E-01	1.0000
279	4.25720E+01	2.69028E-03	0.002 %	1.97910E-03	0.180 %	2.77685E-06	177.8924	7.35677E-01	1.0000
284	4.33350E+01	2.38715E-03	0.001 %	1.75690E-03	0.142 %	2.18725E-06	177.8317	7.35983E-01	1.0000
289	4.40979E+01	2.01803E-03	0.001 %	1.48581E-03	0.102 %	1.56373E-06	177.9532	7.36267E-01	1.0000
294	4.48608E+01	1.70574E-03	0.001 %	1.25249E-03	0.072 %	1.11418E-06	177.9063	7.34279E-01	1.0000
299	4.56238E+01	1.56389E-03	0.001 %	1.15064E-03	0.061 %	9.38464E-07	178.0652	7.33754E-01	1.0000
304	4.63867E+01	1.57105E-03	0.001 %	1.15218E-03	0.061 %	9.44022E-07	178.1365	7.33382E-01	1.0000
309	4.71497E+01	1.46930E-03	0.000 %	1.07584E-03	0.053 %	8.24379E-07	178.3301	7.32209E-01	1.0000
314	4.79126E+01	1.02743E-03	0.000 %	7.54272E-04	0.026 %	4.04159E-07	178.5105	7.34131E-01	1.0000
319	4.86755E+01	3.73300E-04	0.000 %	2.76072E-04	0.004 %	5.37462E-08	178.8282	7.39540E-01	1.0000
324	4.94385E+01	9.11598E-05	0.000 %	6.74551E-05	0.000 %	3.20621E-09	179.6851	7.39801E-01	0.9996
329	5.02014E+01	5.92158E-05	0.000 %	4.31605E-05	0.000 %	1.33184E-09	178.8279	7.28297E-01	0.9984
334	5.09644E+01	5.34504E-05	0.000 %	3.89858E-05	0.000 %	1.08613E-09	178.5144	7.28970E-01	0.9989
339	5.17273E+01	4.74979E-05	0.000 %	3.44698E-05	0.000 %	8.53161E-10	178.1209	7.25124E-01	0.9984
344	5.24902E+01	4.72003E-05	0.000 %	3.43629E-05	0.000 %	8.44790E-10	178.2733	7.27093E-01	0.9974
349	5.32532E+01	4.90192E-05	0.000 %	3.46285E-05	0.000 %	8.83914E-10	178.2437	7.05356E-01	0.9970
354	5.40161E+01	6.04788E-05	0.000 %	4.34003E-05	0.000 %	1.36553E-09	179.2555	7.15882E-01	0.9952
359	5.47790E+01	6.07718E-05	0.000 %	4.31053E-05	0.000 %	1.36888E-09	178.4501	7.06052E-01	0.9974
364	5.55420E+01	3.96027E-05	0.000 %	2.79118E-05	0.000 %	5.74602E-10	174.8243	7.02501E-01	0.9935
369	5.63049E+01	5.51108E-05	0.000 %	3.86644E-05	0.000 %	1.10823E-09	176.7102	6.99669E-01	0.9946
374	5.70679E+01	5.15016E-05	0.000 %	3.51201E-05	0.000 %	9.41434E-10	175.4402	6.80579E-01	0.9961
379	5.78308E+01	6.44938E-05	0.000 %	4.50724E-05	0.000 %	1.51255E-09	175.4001	6.97279E-01	0.9955
384	5.85937E+01	6.99698E-05	0.000 %	4.94334E-05	0.000 %	1.80043E-09	174.3696	7.05154E-01	0.9962
389	5.93567E+01	7.07103E-05	0.000 %	5.03487E-05	0.000 %	1.85453E-09	173.9476	7.11218E-01	0.9977
394	6.01196E+01	9.31882E-05	0.000 %	6.55525E-05	0.000 %	3.23071E-09	176.6702	7.13355E-01	0.9977
399	6.08826E+01	6.84518E-05	0.000 %	4.83307E-05	0.000 %	1.72514E-09	174.8435	7.05968E-01	0.9977
404	6.16455E+01	8.77818E-05	0.000 %	6.28448E-05	0.000 %	2.87378E-09	176.7734	7.15113E-01	0.9977
409	6.24084E+01	7.76835E-05	0.000 %	5.52205E-05	0.000 %	2.23547E-09	175.8214	7.10299E-01	0.9985
414	6.31714E+01	7.53542E-05	0.000 %	5.32697E-05	0.000 %	2.09192E-09	175.4773	7.16414E-01	0.9985
419	6.39343E+01	7.14532E-05	0.000 %	5.02744E-05	0.000 %	1.87203E-09	175.5647	7.03090E-01	0.9936
424	6.46973E+01	7.31727E-05	0.000 %	5.23708E-05	0.000 %	1.99642E-09	176.5892	7.14965E-01	0.9973
429	6.54602E+01	6.86307E-05	0.090 %	4.35192E-05	0.000 %	1.77119E-09	177.6853	7.21036E-01	0.9986
434	6.62231E+01	7.52393E-05	0.000 %	5.34595E-05	0.000 %	2.09587E-09	178.4697	7.09912E-01	0.9983
439	6.69861E+01	8.55010E-05	0.000 %	5.91747E-05	0.000 %	2.63675E-09	178.2567	6.91606E-01	0.9986
444	6.77490E+01	1.01014E-04	0.000 %	7.03225E-05	0.000 %	3.70125E-09	177.9703	5.95553E-01	0.9982
******	************	0.00000E+00	0.000 %	0.00000E+00	0.000 %	************	********	************	******
******	************	************	********	************	********	************	********	************	******
******	************	************	0.000 %	************	0.000 %	************	********	************	******
******	************	************	********	************	********	************	********	************	******

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JCASS# USER NAME.................. JLM
SET - .SV. COMMENTS.............. - INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SVS_ COMMENTS.............. 1004 RUNTITLE FFID=621 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS : VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 19 CHAN = 7

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-AP1V	INPUT AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP2V	OUTPUT AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	4.67236E-03	0.029 %	4.53140E-06	55.7733	2.37475E-01	0.0945
9	1.37329E+00	2.09925E-03	0.001 %	1.46467E-03	0.003 %	3.50462E-07	138.2351	1.52490E-01	0.0478
14	2.13623E+00	9.03653E-04	0.000 %	1.54496E-03	0.003 %	9.97464E-08	250.3047	2.34220E-01	0.0188
19	2.89917E+00	5.55410E-04	0.000 %	1.03255E-03	0.001 %	2.25418E-07	154.8600	1.40117E+00	0.5681
24	3.66211E+00	7.13707E-04	0.000 %	8.12424E-04	0.001 %	2.66933E-07	159.5569	1.00483E+00	0.7792
29	4.42505E+00	7.05548E-04	0.000 %	6.11926E-04	0.000 %	2.16512E-07	164.5935	8.32010E-01	0.9223
34	5.18799E+00	8.37867E-04	0.000 %	4.06885E-04	0.000 %	1.75685E-07	164.7510	4.79862E-01	0.9764
39	5.95093E+00	9.78894E-04	0.000 %	2.87607E-04	0.000 %	1.45907E-07	155.9365	2.91968E-01	0.9875
44	6.71387E+00	1.17014E-03	0.000 %	2.01571E-04	0.000 %	1.21770E-07	132.4014	1.70527E-01	0.9800
49	7.47681E+00	1.33469E-03	0.000 %	1.52371E-04	0.000 %	1.16483E-07	90.6994	1.16494E-01	0.9870
54	8.23975E+00	1.45211E-03	0.000 %	2.09597E-04	0.000 %	1.59462E-07	62.1819	1.43029E-01	0.9956
59	9.00269E+00	1.60034E-03	0.001 %	2.37335E-04	0.000 %	1.97882E-07	48.2632	1.48154E-01	0.9980
64	9.76562E+00	1.78234E-03	0.001 %	2.66632E-04	0.000 %	2.47400E-07	41.3358	1.49331E-01	0.9964
69	1.05286E+01	1.89905E-03	0.001 %	3.14483E-04	0.000 %	3.11367E-07	29.2717	1.55550E-01	0.9994
74	1.12915E+01	2.11759E-03	0.001 %	3.83152E-04	0.000 %	4.22937E-07	26.1873	1.80852E-01	0.9991
79	1.20544E+01	2.04560E-03	0.001 %	3.96941E-04	0.000 %	4.23201E-07	23.4767	1.93925E-01	0.9988
84	1.28174E+01	1.92588E-03	0.001 %	3.86294E-04	0.000 %	3.87933E-07	22.5941	2.00553E-01	0.9997
89	1.35803E+01	1.83122E-03	0.001 %	3.78251E-04	0.000 %	3.61175E-07	21.0402	2.06522E-01	0.9997
94	1.43433E+01	1.91977E-03	0.001 %	4.01803E-04	0.000 %	4.02233E-07	19.3324	2.09271E-01	0.9997
99	1.51062E+01	1.91393E-03	0.001 %	4.08700E-04	0.000 %	4.07862E-07	16.9636	2.13496E-01	0.9996
104	1.58691E+01	2.18742E-03	0.001 %	4.79086E-04	0.000 %	5.46481E-07	15.3907	2.18999E-01	0.9998
109	1.66321E+01	2.31737E-03	0.001 %	5.17333E-04	0.000 %	5.25451E-07	13.8486	2.23206E-01	1.0000
114	1.73950E+01	2.24892E-03	0.001 %	5.12971E-04	0.000 %	5.01603E-07	12.8695	2.28085E-01	0.9999
119	1.81580E+01	2.15024E-03	0.001 %	5.00813E-04	0.000 %	5.61585E-07	12.2051	2.32302E-01	0.9999
124	1.89209E+01	2.20061E-03	0.001 %	5.23644E-04	0.000 %	6.00935E-07	11.1973	2.37942E-01	0.9999
129	1.96838E+01	2.36329E-03	0.001 %	5.73425E-04	0.000 %	7.06737E-07	11.1290	2.42636E-01	1.0000
134	2.04468E+01	2.55972E-03	0.001 %	6.38082E-04	0.001 %	8.51755E-07	11.2616	2.49263E-01	0.9999
139	2.12097E+01	2.83560E-03	0.002 %	7.05313E-04	0.001 %	1.04339E-06	10.5109	2.48544E-01	1.0000
144	2.19727E+01	3.14955E-03	0.002 %	7.82795E-04	0.001 %	1.28535E-06	9.9781	2.48616E-01	1.0000
149	2.27356E+01	3.37616E-03	0.002 %	8.48305E-04	0.001 %	1.49360E-06	9.5880	2.51259E-01	1.0000
154	2.34985E+01	3.76531E-03	0.003 %	9.51300E-04	0.001 %	1.88768E-06	9.2196	2.55303E-01	1.0000
159	2.42615E+01	4.10030E-03	0.004 %	1.05773E-03	0.001 %	2.26181E-06	9.1104	2.57962E-01	1.0000
164	2.50244E+01	3.96571E-03	0.003 %	1.02009E-03	0.001 %	2.10975E-06	9.0210	2.57228E-01	1.0000
169	2.57874E+01	4.38663E-03	0.004 %	1.14018E-03	0.002 %	2.60833E-06	8.9452	2.59920E-01	1.0000
174	2.65503E+01	4.80307E-03	0.005 %	1.26091E-03	0.002 %	3.15845E-06	8.5484	2.52522E-01	1.0000
179	2.73132E+01	5.22219E-03	0.006 %	1.37589E-03	0.002 %	3.74717E-06	8.3805	2.53458E-01	1.0000
184	2.80762E+01	5.39213E-03	0.006 %	1.42898E-03	0.003 %	4.01842E-06	8.0820	2.55012E-01	1.0000
189	2.88391E+01	5.71022E-03	0.007 %	1.52509E-03	0.003 %	4.54169E-06	8.0716	2.57080E-01	1.0000
194	2.96020E+01	5.98304E-03	0.008 %	1.60845E-03	0.003 %	5.02292E-06	8.0816	2.58607E-01	1.0000

199	3.03653E+01	6.21564E-03	0.008 %	1.66605E-03	0.004 %	5.40063E-06	8.1750	2.58041E-01	1.0000
204	3.11279E+01	6.13611E-03	0.008 %	1.64165E-03	0.004 %	5.25343E-06	8.1827	2.57539E-01	1.0000
209	3.18909E+01	5.68553E-03	0.007 %	1.51474E-03	0.003 %	4.49133E-06	8.1748	2.56421E-01	1.0000
214	3.26538E+01	5.37138E-03	0.006 %	1.42783E-03	0.003 %	3.99974E-06	8.1767	2.55822E-01	1.0000
219	3.34167E+01	5.44128E-03	0.006 %	1.44812E-03	0.003 %	4.10939E-06	7.8934	2.56136E-01	1.0000
224	3.41797E+01	5.66450E-03	0.007 %	1.50865E-03	0.003 %	4.45675E-06	7.5401	2.56333E-01	1.0000
229	3.49425E+01	5.72287E-03	0.007 %	1.52165E-03	0.003 %	4.54150E-06	7.5823	2.55890E-01	1.0000
234	3.57055E+01	5.39458E-03	0.006 %	1.42875E-03	0.003 %	4.01962E-06	7.5529	2.54850E-01	1.0000
239	3.64685E+01	4.99317E-03	0.005 %	1.32101E-03	0.002 %	3.43993E-06	7.5897	2.64563E-01	1.0000
244	3.72314E+01	4.69447E-03	0.005 %	1.23702E-03	0.002 %	3.02854E-06	7.4352	2.53506E-01	1.0000
249	3.79944E+01	4.59751E-03	0.004 %	1.21217E-03	0.002 %	2.90643E-06	7.1057	2.53658E-01	1.0000
254	3.87573E+01	4.27144E-03	0.004 %	1.12371E-03	0.002 %	2.50322E-06	6.9472	2.53076E-01	1.0000
259	3.95203E+01	3.85978E-03	0.003 %	1.01590E-03	0.001 %	2.04495E-06	6.8513	2.53202E-01	1.0000
264	4.02832E+01	3.30804E-03	0.002 %	8.70544E-04	0.001 %	1.50185E-06	6.8602	2.53150E-01	1.0000
269	4.10461E+01	3.07352E-03	0.002 %	8.13617E-04	0.001 %	1.30563E-06	6.8852	2.54203E-01	1.0000
274	4.18091E+01	2.94705E-03	0.002 %	7.80975E-04	0.001 %	1.20031E-06	5.9395	2.55002E-01	1.0000
279	4.25720E+01	2.69028E-03	0.002 %	7.12259E-04	0.001 %	9.99323E-07	7.1343	2.54752E-01	1.0000
284	4.33350E+01	2.38715E-03	0.001 %	6.33564E-04	0.001 %	7.88874E-07	7.3103	2.55447E-01	1.0000
289	4.40979E+01	2.01803E-03	0.001 %	5.33592E-04	0.000 %	5.61572E-07	7.5666	2.54410E-01	1.0000
294	4.48608E+01	1.70574E-03	0.001 %	4.49804E-04	0.000 %	4.00128E-07	7.6343	2.53697E-01	1.0000
299	4.56235E+01	1.56389E-03	0.001 %	4.12798E-04	0.000 %	3.36673E-07	7.7830	2.53351E-01	1.0000
304	4.63867E+01	1.57105E-03	0.001 %	4.14814E-04	0.000 %	3.39861E-07	7.6964	2.54027E-01	0.9999
309	4.71497E+01	1.46930E-03	0.000 %	3.87783E-04	0.000 %	2.97131E-07	7.8054	2.53911E-01	0.9999
314	4.79126E+01	1.02743E-03	0.000 %	2.71954E-04	0.000 %	1.45700E-07	7.7519	2.54655E-01	0.9997
319	4.86755E+01	3.73300E-04	0.000 %	9.97371E-05	0.000 %	1.93953E-08	7.8551	2.56877E-01	0.9978
324	4.94385E+01	9.11598E-05	0.000 %	2.58685E-05	0.000 %	1.21024E-09	7.6023	2.79251E-01	0.9684
329	5.02014E+01	5.92158E-05	0.000 %	1.84410E-05	0.000 %	5.55654E-10	8.6356	3.03851E-01	0.9520
334	5.09644E+01	5.34504E-05	0.000 %	1.52452E-05	0.000 %	4.37275E-10	11.1931	2.33483E-01	0.9324
339	5.17273E+01	4.74979E-05	0.000 %	1.50562E-05	0.000 %	3.51931E-10	11.4890	2.99116E-01	0.8904
344	5.24902E+01	4.72003E-05	0.000 %	1.44664E-05	0.000 %	3.20183E-10	16.7409	2.75575E-01	0.8084
349	5.32532E+01	4.90192E-05	0.000 %	1.93047E-05	0.000 %	4.75595E-10	18.7909	3.79522E-01	0.9287
354	5.40161E+01	6.04788E-05	0.000 %	2.13590E-05	0.000 %	5.28967E-10	9.6023	3.29724E-01	0.8717
359	5.47790E+01	5.09718E-05	0.000 %	2.22382E-05	0.000 %	5.68761E-10	15.9844	3.44940E-01	0.8944
364	5.55420E+01	3.96027E-05	0.000 %	1.67115E-05	0.000 %	3.20892E-10	30.1719	3.92318E-01	0.8643
369	5.63049E+01	5.51108E-05	0.000 %	2.18166E-05	0.000 %	5.83772E-10	21.4375	3.58553E-01	0.8660
374	5.70679E+01	5.15016E-05	0.000 %	2.29262E-05	0.000 %	5.98099E-10	25.1930	4.32376E-01	0.9434
379	5.78308E+01	6.44938E-05	0.000 %	2.47606E-05	0.000 %	7.95244E-10	25.7032	3.56602E-01	0.9118
384	5.85937E+01	6.99698E-05	0.000 %	2.73596E-05	0.000 %	9.55375E-10	24.2557	3.74182E-01	0.9157
389	5.93567E+01	7.07103E-05	0.000 %	2.84922E-05	0.000 %	1.03073E-09	28.3553	3.95302E-01	0.9624
394	6.01196E+01	9.31882E-05	0.000 %	3.52022E-05	0.000 %	1.64395E-09	22.0089	3.62993E-01	0.9234
399	6.08826E+01	6.84518E-05	0.000 %	3.09146E-05	0.000 %	1.07938E-09	26.5707	4.41707E-01	0.9365
404	6.16455E+01	8.77818E-05	0.000 %	3.50552E-05	0.000 %	1.56359E-09	25.0068	3.89084E-01	0.9493
409	6.24084E+01	7.76835E-05	0.000 %	3.25371E-05	0.000 %	1.30253E-09	30.7032	4.13868E-01	0.9764
414	6.31714E+01	7.53542E-05	0.000 %	3.20223E-05	0.000 %	1.25145E-09	28.4744	4.22598E-01	0.9889
419	6.39343E+01	7.14532E-05	0.000 %	3.00695E-05	0.000 %	1.10737E-09	29.2642	4.16642E-01	0.9802
424	6.46973E+01	7.31727E-05	0.000 %	2.95479E-05	0.000 %	1.11803E-09	27.2154	4.00413E-01	0.9832
429	6.54602E+01	6.85307E-05	0.000 %	2.89934E-05	0.000 %	1.02692E-09	26.1729	4.18050E-01	0.9793
434	6.62231E+01	7.52393E-05	0.000 %	3.00925E-05	0.000 %	1.17432E-09	27.4908	3.97764E-01	0.9891
439	6.69861E+01	8.55010E-05	0.000 %	3.27588E-05	0.000 %	1.45423E-09	24.8390	3.81441E-01	0.9911
444	6.77490E+01	1.01014E-04	0.000 %	3.73148E-05	0.000 %	1.95423E-09	23.1344	3.57245E-01	0.9884
******************		0.00000E+00	0.000 %	0.00000E+00	0.000 %	**********	**********	**********	**********
**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
**********	**********		0.000 %	**********	0.000 %	**********	**********	**********	**********
**********	**********	**********	**********	**********	**********	**********	**********	**********	**********

SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME.................. GLM
SET - .SVS COMMENTS............... INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNG. COMMENTS.............. 1004 RUNTITLE FFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 3 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 20 CHAN = 8

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APIV	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP3V	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	1.04021E-02	0.098 %	8.29745E-06	-302.1898	4.34841E-01	0.0639
9	1.37329E+00	2.09925E-03	0.001 %	2.57221E-03	0.005 %	2.01005E-06	-121.5927	8.74597E-01	0.4721
14	2.13623E+00	9.03653E-04	0.000 %	2.22019E-03	0.004 %	5.56158E-07	-285.1057	1.30595E+00	0.2825
19	2.89917E+00	5.55410E-04	0.000 %	7.54148E-04	0.001 %	8.30429E-08	-9.5763	5.16185E-01	0.1445
24	3.66211E+00	7.13707E-04	0.000 %	9.54210E-04	0.001 %	2.35702E-07	-50.1838	8.37264E-01	0.4404
29	4.42505E+00	7.06543E-04	0.000 %	3.71212E-04	0.000 %	1.23812E-07	5.5295	4.75563E-01	0.8193
34	5.18799E+00	8.37867E-04	0.000 %	5.88193E-04	0.000 %	2.09487E-07	2.3875	5.72185E-01	0.6643
39	5.95093E+00	9.78894E-04	0.000 %	6.08955E-04	0.000 %	3.05925E-07	5.2674	6.12172E-01	0.9684
44	6.71387E+00	1.17014E-03	0.000 %	6.93401E-04	0.000 %	4.15480E-07	6.9773	5.81837E-01	0.9641
49	7.47681E+00	1.33459E-03	0.000 %	8.09818E-04	0.001 %	5.80701E-07	6.3288	5.30730E-01	0.9860
54	8.23975E+00	1.45211E-03	0.000 %	9.05300E-04	0.001 %	6.85382E-07	7.2573	6.14754E-01	0.9858
59	9.00269E+00	1.60034E-03	0.001 %	9.67205E-04	0.001 %	8.06122E-07	6.7694	6.03542E-01	0.9972
64	9.76562E+00	1.78234E-03	0.001 %	1.07132E-03	0.001 %	9.94158E-07	6.8330	6.00076E-01	0.9967
69	1.05286E+01	1.89905E-03	0.001 %	1.14757E-03	0.001 %	1.13494E-06	5.0669	6.03433E-01	0.9972
74	1.12915E+01	2.11759E-03	0.001 %	1.28606E-03	0.002 %	1.41907E-06	5.6533	6.06806E-01	0.9983
79	1.20544E+01	2.04560E-03	0.001 %	1.25389E-03	0.001 %	1.33733E-06	6.3732	6.12808E-01	0.9995
84	1.28174E+01	1.92588E-03	0.001 %	1.16386E-03	0.001 %	1.16855E-06	6.5432	6.04120E-01	0.9993
89	1.35803E+01	1.83122E-03	0.001 %	1.10583E-03	0.001 %	1.05490E-06	6.4497	6.03195E-01	0.9977
94	1.43433E+01	1.91977E-03	0.001 %	1.16141E-03	0.001 %	1.16200E-06	7.2256	6.04558E-01	0.9985
99	1.51062E+01	1.91393E-03	0.001 %	1.13991E-03	0.001 %	1.13710E-06	7.7017	5.95217E-01	0.9988
104	1.58691E+01	2.18742E-03	0.001 %	1.30397E-03	0.002 %	1.48742E-06	7.8499	5.96076E-01	0.9998
109	1.66321E+01	2.31797E-03	0.001 %	1.36718E-03	0.002 %	1.65222E-06	7.2698	5.89632E-01	0.9994
114	1.73950E+01	2.24332E-03	0.001 %	1.34010E-03	0.002 %	1.57170E-06	6.7702	5.95873E-01	1.0000
119	1.81580E+01	2.15024E-03	0.001 %	1.29134E-03	0.002 %	1.44779E-06	7.3572	6.00429E-01	0.9995
124	1.89209E+01	2.20061E-03	0.001 %	1.30876E-03	0.002 %	1.50182E-06	6.6338	5.94652E-01	0.9997
129	1.96838E+01	2.36329E-03	0.001 %	1.40538E-03	0.002 %	1.73210E-06	7.3022	5.94660E-01	1.0000
134	2.04468E+01	2.55972E-03	0.001 %	1.54815E-03	0.002 %	2.06651E-06	7.7497	6.04757E-01	0.9998
139	2.12097E+01	2.83660E-03	0.002 %	1.68297E-03	0.003 %	2.48965E-06	7.7931	5.93278E-01	1.0000
144	2.19727E+01	3.14355E-03	0.002 %	1.85185E-03	0.003 %	3.04073E-06	7.1990	5.88156E-01	1.0000
149	2.27356E+01	3.37616E-03	0.002 %	1.98607E-03	0.004 %	3.49691E-06	7.2054	5.88258E-01	1.0000
154	2.34985E+01	3.76531E-03	0.003 %	2.21948E-03	0.004 %	4.35829E-06	6.9753	5.89446E-01	1.0000
159	2.42615E+01	4.10030E-03	0.004 %	2.41110E-03	0.005 %	5.15583E-06	7.0578	5.88029E-01	1.0000
164	2.50244E+01	3.96571E-03	0.003 %	2.32048E-03	0.005 %	4.79917E-06	6.5534	5.85134E-01	1.0000
169	2.57874E+01	4.38563E-03	0.004 %	2.58366E-03	0.006 %	5.91064E-06	6.8505	5.88981E-01	1.0000
174	2.65503E+01	4.80307E-03	0.005 %	2.81533E-03	0.007 %	7.05222E-06	6.3245	5.86163E-01	1.0000
179	2.73132E+01	5.22219E-03	0.006 %	3.05600E-03	0.008 %	8.32292E-06	5.9189	5.85195E-01	1.0000
184	2.80762E+01	5.39213E-03	0.006 %	3.18713E-03	0.009 %	8.96250E-06	5.6081	5.91070E-01	1.0000
189	2.88391E+01	5.71022E-03	0.007 %	3.37389E-03	0.010 %	1.00474E-05	6.1300	5.90850E-01	1.0000
194	2.96020E+01	5.98804E-03	0.008 %	3.54284E-03	0.011 %	1.10638E-05	6.1805	5.91650E-01	1.0000

199	3.03365E+01	6.21564E-03	0.008 %	3.65637E-03	0.012 %	1.18524E-05	6.1732	5.88252E-01	1.0000
204	3.11279E+01	6.13511E-03	0.008 %	3.57065E-03	0.012 %	1.14264E-05	6.8326	5.81907E-01	1.0000
209	3.18909E+01	5.68553E-03	0.007 %	3.32125E-03	0.010 %	9.84784E-06	6.9437	5.84157E-01	1.0000
214	3.26533E+01	5.37138E-03	0.006 %	3.08960E-03	0.009 %	8.65481E-06	6.6403	5.75197E-01	1.0000
219	3.34167E+01	5.44128E-03	0.006 %	3.11433E-03	0.009 %	8.83762E-06	7.1894	5.72351E-01	1.0000
224	3.41797E+01	5.65450E-03	0.007 %	3.22909E-03	0.009 %	9.53920E-06	6.9980	5.70057E-01	1.0000
229	3.49426E+01	5.72287E-03	0.007 %	3.28615E-03	0.010 %	9.80783E-06	6.8690	5.74213E-01	1.0000
234	3.57055E+01	5.39458E-03	0.006 %	3.10004E-03	0.009 %	8.72163E-06	6.9256	5.74665E-01	1.0000
239	3.64685E+01	4.99317E-03	0.006 %	2.85740E-03	0.007 %	7.44075E-06	7.1528	5.72250E-01	1.0000
244	3.72314E+01	4.69447E-03	0.005 %	2.57262E-03	0.006 %	6.54324E-06	6.8112	5.59312E-01	1.0000
249	3.79944E+01	4.59751E-03	0.004 %	2.50668E-03	0.006 %	6.24999E-06	6.5474	5.66975E-01	1.0000
254	3.87573E+01	4.27144E-03	0.004 %	2.42377E-03	0.005 %	5.39928E-06	6.3965	5.67437E-01	1.0000
259	3.95203E+01	3.85978E-03	0.003 %	2.19741E-03	0.004 %	4.42329E-06	6.5389	5.69310E-01	1.0000
264	4.02832E+01	3.30804E-03	0.002 %	1.89230E-03	0.003 %	3.26460E-06	6.4512	5.72031E-01	1.0000
269	4.10461E+01	3.07352E-03	0.002 %	1.76582E-03	0.003 %	2.83593E-06	6.5822	5.73407E-01	1.0000
274	4.18091E+01	2.94705E-03	0.002 %	1.68061E-03	0.003 %	2.58300E-06	6.9843	5.70268E-01	1.0000
279	4.25720E+01	2.69028E-03	0.002 %	1.53966E-03	0.002 %	2.16019E-06	7.4300	5.72302E-01	1.0000
284	4.33350E+01	2.38715E-03	0.001 %	1.37145E-03	0.002 %	1.70738E-06	7.5650	5.74512E-01	1.0000
289	4.40979E+01	2.01803E-03	0.001 %	1.14754E-03	0.001 %	1.20771E-06	8.1583	5.68638E-01	1.0000
294	4.48608E+01	1.70574E-03	0.001 %	9.63111E-04	0.001 %	9.56750E-07	8.3379	5.64625E-01	1.0000
299	4.56238E+01	1.56389E-03	0.001 %	8.84181E-04	0.001 %	7.21135E-07	8.5097	5.65369E-01	1.0000
304	4.63867E+01	1.57105E-03	0.001 %	8.85217E-04	0.001 %	7.25285E-07	8.6133	5.63452E-01	1.0000
309	4.71497E+01	1.46930E-03	0.000 %	8.23683E-04	0.001 %	5.31158E-07	8.7815	5.60592E-01	1.0000
314	4.79126E+01	1.02743E-03	0.000 %	5.75795E-04	0.000 %	3.08525E-07	8.7749	5.60419E-01	1.0000
319	4.86755E+01	3.73300E-04	0.000 %	2.10861E-04	0.000 %	4.10473E-08	8.8495	5.64805E-01	0.9998
324	4.94385E+01	9.11598E-05	0.000 %	5.14704E-05	0.000 %	2.44625E-09	9.7523	5.64449E-01	0.9994
329	5.02014E+01	5.92158E-05	0.000 %	3.29825E-05	0.000 %	1.01161E-09	10.8774	5.53183E-01	0.9864
334	5.09644E+01	5.34504E-05	0.000 %	2.89908E-05	0.000 %	8.03863E-10	8.7244	5.39522E-01	0.9895
339	5.17273E+01	4.74979E-05	0.000 %	2.58577E-05	0.000 %	5.39173E-10	8.9030	5.43252E-01	0.9958
344	5.24902E+01	4.72003E-05	0.000 %	2.53384E-05	0.000 %	6.22920E-10	9.8091	5.36134E-01	0.9974
349	5.32532E+01	4.90192E-05	0.000 %	2.73006E-05	0.000 %	6.96597E-10	9.3667	5.55878E-01	0.9962
354	5.40161E+01	6.04788E-05	0.000 %	3.36880E-05	0.000 %	1.06005E-09	9.3645	5.55718E-01	0.9953
359	5.47790E+01	5.09718E-05	0.000 %	3.40809E-05	0.000 %	1.08175E-09	7.2554	5.57963E-01	0.9964
364	5.55420E+01	3.96027E-05	0.000 %	2.10131E-05	0.000 %	4.32463E-10	2.3276	5.20724E-01	0.9930
369	5.63049E+01	5.51108E-05	0.000 %	2.94504E-05	0.000 %	8.42477E-10	3.7370	5.31881E-01	0.9906
374	5.70679E+01	5.15016E-05	0.000 %	2.63510E-05	0.000 %	7.06121E-10	1.9311	5.10466E-01	0.9954
379	5.78308E+01	6.44938E-05	0.000 %	3.50770E-05	0.000 %	1.20612E-09	1.2211	5.56014E-01	0.9880
384	5.85937E+01	6.93598E-05	0.000 %	3.98930E-05	0.000 %	1.41451E-09	2.5310	5.54007E-01	0.9934
389	5.93567E+01	7.07103E-05	0.000 %	4.20682E-05	0.000 %	1.54693E-09	4.7234	5.93247E-01	0.9943
394	6.01196E+01	9.31382E-05	0.000 %	5.25845E-05	0.000 %	2.55303E-09	7.9298	5.63721E-01	0.9980
399	6.08825E+01	6.84518E-05	0.000 %	3.88993E-05	0.000 %	1.38605E-09	3.4345	5.57203E-01	0.9962
404	6.16455E+01	8.77818E-05	0.000 %	4.93163E-05	0.000 %	2.25395E-09	6.4931	5.60877E-01	0.9967
409	6.24084E+01	7.76835E-05	0.000 %	4.66885E-05	0.000 %	1.88905E-09	5.3803	6.00229E-01	0.9974
414	6.31714E+01	7.55542E-05	0.000 %	4.44691E-05	0.000 %	1.74530E-09	5.1591	5.89364E-01	0.9974
419	6.39343E+01	7.14532E-05	0.000 %	4.10380E-05	0.000 %	1.52535E-09	2.3809	5.72872E-01	0.9949
424	6.46973E+01	7.31727E-05	0.000 %	4.29737E-05	0.000 %	1.63647E-09	5.0799	5.86065E-01	0.9958
429	6.54602E+01	6.86307E-05	0.000 %	4.12563E-05	0.000 %	1.47412E-09	5.7275	6.00102E-01	0.9966
434	6.62231E+01	7.52393E-05	0.000 %	4.37630E-05	0.000 %	1.70995E-09	4.5373	5.79199E-01	0.9916
439	6.69861E+01	8.55010E-05	0.000 %	4.79865E-05	0.000 %	2.13280E-09	3.7515	5.94208E-01	0.9935
444	6.77490E+01	1.01014E-04	0.000 %	5.77665E-05	0.000 %	3.03499E-09	4.4348	5.70530E-01	0.9946
********************		0.00000E+00	0.000 %	0.00000E+00	0.000 %	********			

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****************************** 0.000 % ************ 0.000 % **

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SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME...................GLM
SET - .SVN COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS.............. 1014 RUNTITLE FFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 1 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 21 CHAN = 9

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-AP1V	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP4V	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	3.44021E-03	0.007 %	5.02604E-06	16.4078	3.15804E-01	0.3083
9	1.37329E+00	2.09925E-03	0.001 %	1.94503E-03	0.002 %	3.63078E-07	85.2028	1.57979E-01	0.0291
14	2.13623E+00	9.03653E-04	0.000 %	4.16266E-04	0.000 %	1.41053E-07	-342.9415	3.31213E-01	0.5170
19	2.89917E+00	5.55410E-04	0.000 %	3.30744E-04	0.000 %	1.11304E-08	82.4221	5.91855E-02	0.0135
24	3.66211E+00	7.13707E-04	0.000 %	2.41305E-04	0.000 %	6.96322E-08	35.4569	2.52120E-01	0.6010
29	4.42505E+00	7.06548E-04	0.000 %	2.39619E-04	0.000 %	8.35183E-08	13.3991	3.20797E-01	0.8948
34	5.18799E+00	8.37867E-04	0.000 %	3.34072E-04	0.000 %	1.43943E-07	1.1561	3.93174E-01	0.9724
39	5.95093E+00	9.78894E-04	0.000 %	4.15212E-04	0.000 %	2.10904E-07	9.3583	4.22030E-01	0.9900
44	6.71387E+00	1.17014E-03	0.000 %	5.00661E-04	0.000 %	3.04754E-07	4.5604	4.26776E-01	0.9949
49	7.47681E+00	1.38469E-03	0.000 %	5.51848E-04	0.000 %	3.96713E-07	7.7316	3.96735E-01	0.9910
54	8.23975E+00	1.45211E-03	0.000 %	6.38079E-04	0.000 %	4.85824E-07	8.8131	4.35760E-01	0.9970
59	9.00268E+00	1.60034E-03	0.001 %	6.86511E-04	0.000 %	5.72563E-07	9.9672	4.28681E-01	0.9985
64	9.76562E+00	1.78234E-03	0.001 %	7.59605E-04	0.000 %	7.05914E-07	11.2829	4.26091E-01	0.9996
69	1.05286E+01	1.89905E-03	0.001 %	8.05845E-04	0.000 %	7.98013E-07	9.5607	4.24294E-01	0.9998
74	1.12915E+01	2.11759E-03	0.001 %	9.10019E-04	0.001 %	1.00479E-06	10.0178	4.29653E-01	0.9996
79	1.20544E+01	2.04560E-03	0.001 %	8.76840E-04	0.000 %	9.35343E-07	10.9162	4.28605E-01	0.9998
84	1.28174E+01	1.92588E-03	0.001 %	8.15138E-04	0.000 %	8.18675E-07	11.4406	4.23238E-01	0.9999
89	1.35803E+01	1.83122E-03	0.001 %	7.71110E-04	0.000 %	7.36393E-07	11.8106	4.21077E-01	0.9999
94	1.43433E+01	1.91977E-03	0.001 %	8.01333E-04	0.000 %	8.02232E-07	12.4400	4.17379E-01	0.9999
99	1.51062E+01	1.91393E-03	0.001 %	7.91556E-04	0.000 %	7.90073E-07	12.1652	4.13565E-01	0.9999
104	1.58691E+01	2.18742E-03	0.001 %	8.87995E-04	0.000 %	1.01299E-06	12.5608	4.05950E-01	1.0000
109	1.66321E+01	2.31797E-03	0.001 %	9.39304E-04	0.001 %	1.13549E-06	11.8043	4.05223E-01	1.0000
114	1.73950E+01	2.24372E-03	0.001 %	9.13902E-04	0.001 %	1.07184E-06	11.5285	4.06361E-01	0.9999
119	1.81580E+01	2.15024E-03	0.001 %	8.79096E-04	0.000 %	9.85803E-07	11.7164	4.08834E-01	1.0000
124	1.89209E+01	2.20061E-03	0.001 %	8.95546E-04	0.000 %	1.02777E-06	11.6140	4.06951E-01	1.0000
129	1.96838E+01	2.36329E-03	0.001 %	9.66736E-04	0.001 %	1.19150E-06	11.9781	4.09062E-01	1.0000
134	2.04468E+01	2.55972E-03	0.001 %	1.05998E-03	0.001 %	1.41493E-06	12.5515	4.14088E-01	0.9999
139	2.12097E+01	2.83560E-03	0.002 %	1.15437E-03	0.001 %	1.70859E-06	12.5987	4.07165E-01	1.0000
144	2.19727E+01	3.14855E-03	0.002 %	1.26567E-03	0.001 %	2.07825E-06	12.4190	4.01982E-01	1.0000
149	2.27356E+01	3.37516E-03	0.002 %	1.35747E-03	0.001 %	2.39011E-06	12.2402	4.02071E-01	1.0000
154	2.34985E+01	3.75531E-03	0.003 %	1.52012E-03	0.001 %	2.98503E-06	11.9981	4.03717E-01	1.0000
159	2.42615E+01	4.10030E-03	0.004 %	1.65632E-03	0.002 %	3.54182E-06	12.1930	4.03949E-01	1.0000
164	2.50244E+01	3.96571E-03	0.003 %	1.59405E-03	0.002 %	3.29681E-06	12.1681	4.01959E-01	1.0000
169	2.57874E+01	4.38563E-03	0.004 %	1.76169E-03	0.002 %	4.03023E-06	12.3188	4.01603E-01	1.0000
174	2.65503E+01	4.80307E-03	0.005 %	1.93594E-03	0.002 %	4.84931E-06	12.2094	4.03063E-01	1.0000
179	2.73132E+01	5.22219E-03	0.006 %	2.11547E-03	0.003 %	5.76141E-06	12.2944	4.05072E-01	1.0000
184	2.80762E+01	5.39213E-03	0.006 %	2.19674E-03	0.003 %	6.17742E-06	12.4569	4.07396E-01	1.0000
189	2.88391E+01	5.71022E-03	0.007 %	2.33886E-03	0.003 %	6.96507E-06	13.0105	4.09591E-01	1.0000
194	2.96020E+01	5.98804E-03	0.008 %	2.45788E-03	0.004 %	7.67557E-06	13.4670	4.10460E-01	1.0000

199	3.03659E+01	6.21564E-03	0.008 %	2.53511E-03	0.004 %	8.21774E-06	14.0367	4.07853E-01	1.0000
204	3.11274E+01	6.15511E-03	0.008 %	2.48214E-03	0.004 %	7.94309E-06	14.4459	4.04514E-01	1.0000
209	3.18909E+01	5.63553E-03	0.007 %	2.27561E-03	0.003 %	6.74744E-06	14.7486	4.00246E-01	1.0000
214	3.26533E+01	5.37138E-03	-0.006 %	2.12855E-03	0.003 %	5.96264E-06	14.8832	3.96276E-01	1.0000
219	3.34167E+01	5.44128E-03	0.006 %	2.14796E-03	0.003 %	5.09534E-06	14.8316	3.94752E-01	1.0000
224	3.41797E+01	5.66450E-03	0.007 %	2.22710E-03	0.003 %	6.57915E-06	14.7032	3.93167E-01	1.0000
229	3.49426E+01	5.72287E-03	0.007 %	2.23903E-03	0.003 %	6.68253E-06	14.7153	3.91243E-01	1.0000
234	3.57056E+01	5.39458E-03	0.006 %	2.09387E-03	0.003 %	5.89084E-06	14.6475	3.88143E-01	1.0000
239	3.64685E+01	4.99317E-03	0.005 %	1.92339E-03	0.002 %	5.00985E-06	14.5435	3.85303E-01	1.0000
244	3.72314E+01	4.63447E-03	0.005 %	1.80005E-03	0.002 %	4.40693E-06	14.1096	3.83442E-01	1.0000
249	3.79944E+01	4.59751E-03	0.004 %	1.76647E-03	0.002 %	4.23544E-06	13.7536	3.84223E-01	1.0000
254	3.87573E+01	4.27144E-03	0.004 %	1.64553E-03	0.002 %	3.66569E-06	13.4640	3.85246E-01	1.0000
259	3.95203E+01	3.85978E-03	0.003 %	1.49045E-03	0.001 %	3.00020E-06	13.5197	3.86149E-01	1.0000
264	4.02832E+01	3.30404E-03	0.002 %	1.27963E-03	0.001 %	2.20773E-06	13.7728	3.86844E-01	1.0000
269	4.10461E+01	3.07052E-03	0.002 %	1.20038E-03	0.001 %	1.92784E-06	14.1373	3.89794E-01	1.0000
274	4.18091E+01	2.94705E-03	0.002 %	1.15561E-03	0.001 %	1.77611E-06	14.6456	3.92125E-01	1.0000
279	4.25720E+01	2.69028E-03	0.002 %	1.05459E-03	0.001 %	1.47962E-06	15.3567	3.91999E-01	1.0000
284	4.33350E+01	2.38715E-03	0.001 %	9.35158E-04	0.001 %	1.16422E-06	15.8695	3.91746E-01	1.0000
289	4.40979E+01	2.01803E-03	0.001 %	7.86392E-04	0.000 %	8.27632E-07	16.5239	3.89682E-01	1.0000
294	4.48608E+01	1.70574E-03	0.001 %	6.60399E-04	0.000 %	5.87472E-07	16.9509	3.87163E-01	1.0000
299	4.56238E+01	1.56389E-03	0.001 %	6.06301E-04	0.000 %	4.94499E-07	17.5317	3.87686E-01	1.0000
304	4.63867E+01	1.57105E-03	0.001 %	6.06650E-04	0.000 %	4.97047E-07	18.1329	3.86140E-01	1.0000
309	4.71497E+01	1.46930E-03	0.000 %	5.54827E-04	0.000 %	4.32803E-07	18.7089	3.84418E-01	1.0000
314	4.79126E+01	1.02743E-03	0.000 %	3.95072E-04	0.000 %	2.11689E-07	19.0770	3.84520E-01	1.0000
319	4.86755E+01	3.73300E-04	0.000 %	1.44242E-04	0.000 %	2.80793E-08	19.3736	3.86368E-01	0.9998
324	4.94385E+01	9.11598E-05	0.000 %	3.54270E-05	0.000 %	1.68283E-09	20.0947	3.88297E-01	0.9983
329	5.02014E+01	5.92158E-05	0.000 %	2.31339E-05	0.000 %	7.13651E-10	19.1227	3.90249E-01	0.9978
334	5.09644E+01	5.34504E-05	0.000 %	2.07082E-05	0.000 %	5.76793E-10	19.4734	3.87122E-01	0.9984
339	5.17273E+01	4.74979E-05	0.000 %	1.83895E-05	0.000 %	4.54969E-10	19.7706	3.85690E-01	0.9976
344	5.24902E+01	4.72003E-05	0.000 %	1.77204E-05	0.000 %	4.35543E-10	22.3865	3.74949E-01	0.9974
349	5.32532E+01	4.90192E-05	0.000 %	1.87043E-05	0.000 %	4.77642E-10	23.8149	3.81154E-01	0.9978
354	5.40161E+01	6.04788E-05	0.000 %	2.26730E-05	0.000 %	7.14535E-10	23.2179	3.74582E-01	0.9983
359	5.47790E+01	6.09718E-05	0.000 %	2.25317E-05	0.000 %	7.15791E-10	22.3454	3.59198E-01	0.9981
364	5.55420E+01	3.96027E-05	0.000 %	1.46345E-05	0.000 %	3.01502E-10	19.6317	3.68613E-01	0.9950
369	5.63049E+01	5.61108E-05	0.000 %	1.99011E-05	0.000 %	5.71524E-10	20.3538	3.50820E-01	0.9984
374	5.70679E+01	5.15016E-05	0.000 %	1.87126E-05	0.000 %	5.02073E-10	19.2769	3.62957E-01	0.9979
379	5.78308E+01	6.44938E-05	0.000 %	2.29788E-05	0.000 %	7.70907E-10	20.2442	3.55382E-01	0.9949
384	5.85937E+01	6.93598E-05	0.000 %	2.55691E-05	0.000 %	9.31189E-10	19.6305	3.54709E-01	0.9961
389	5.93567E+01	7.07103E-05	0.000 %	2.57807E-05	0.000 %	9.48515E-10	18.6190	3.53755E-01	0.9954
394	6.01196E+01	9.31882E-05	0.000 %	3.35195E-05	0.000 %	1.62569E-09	18.8539	3.58958E-01	0.9953
399	6.08826E+01	6.84518E-05	0.000 %	2.59388E-05	0.000 %	9.24853E-10	15.7421	3.78471E-01	0.9975
404	6.16455E+01	8.77818E-05	0.000 %	3.28379E-05	0.000 %	1.50018E-09	17.7626	3.73306E-01	0.9958
409	6.24084E+01	7.76835E-05	0.000 %	3.01387E-05	0.000 %	1.21913E-09	17.3859	3.87384E-01	0.9970
414	6.31714E+01	7.53542E-05	0.000 %	2.94183E-05	0.000 %	1.15483E-09	16.7822	3.89971E-01	0.9978
419	6.39343E+01	7.14532E-05	0.000 %	2.76565E-05	0.000 %	1.02854E-09	17.5885	3.86284E-01	0.9953
424	6.46973E+01	7.31727E-05	0.000 %	2.84872E-05	0.000 %	1.08423E-09	18.1609	3.98294E-01	0.9948
429	6.54602E+01	6.85307E-05	0.000 %	2.71451E-05	0.000 %	9.69293E-10	18.8324	3.94594E-01	0.9953
434	6.62231E+01	7.52393E-05	0.000 %	2.95476E-05	0.000 %	1.15681E-09	20.0502	3.91835E-01	0.9955
439	6.69861E+01	8.55010E-05	0.000 %	3.30916E-05	0.000 %	1.47263E-09	19.4899	3.86275E-01	0.9961
444	6.77490E+01	1.01014E-04	0.000 %	3.39675E-05	0.000 %	2.04952E-09	19.0079	3.85141E-01	0.9968
******************		0.00000E+00	0.000 %	0.00000E+00	0.000 %	********************			
******************************			0.000 %	************	0.000 %	********************			

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
CASSN USER NAME...................GLM
SET - .SVS COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNSL COMMENTS.............. 1004 RUNTITLE EFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 22 CHAN = 10

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APIV	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP7V	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	4.36573E-04	0.003 %	7.70603E-07	-125.8222	4.03847E-02	0.3131
9	1.37329E+00	2.09925E-03	0.001 %	6.15349E-05	0.000 %	4.39303E-08	147.1310	1.91147E-02	0.4252
14	2.13623E+00	9.03653E-04	0.000 %	6.27292E-05	0.000 %	1.66583E-08	241.1467	3.91163E-02	0.3175
19	2.89917E+00	5.55410E-04	0.000 %	5.85489E-05	0.000 %	1.07271E-08	14.0400	5.55783E-02	0.4001
24	3.66211E+00	7.13707E-04	0.000 %	6.77262E-05	0.000 %	2.03803E-08	5.4839	7.57206E-02	0.6537
29	4.42505E+00	7.05548E-04	0.000 %	8.91311E-05	0.000 %	3.19919E-08	9.8546	1.22882E-01	0.9489
34	5.18799E+00	8.37867E-04	0.000 %	1.09303E-04	0.000 %	4.69900E-08	17.8025	1.28347E-01	0.9680
39	5.95093E+00	9.78894E-04	0.000 %	1.30663E-04	0.000 %	5.64525E-08	16.8140	1.32975E-01	0.9924
44	6.71387E+00	1.17014E-03	0.000 %	1.57747E-04	0.000 %	9.60793E-08	22.3063	1.34549E-01	0.9961
49	7.47681E+00	1.38459E-03	0.000 %	1.77233E-04	0.000 %	1.27815E-07	23.3444	1.27820E-01	0.9973
54	8.23975E+00	1.46211E-03	0.000 %	1.90035E-04	0.000 %	1.44825E-07	28.0807	1.29901E-01	0.9989
59	9.00269E+00	1.60034E-03	0.001 %	1.91847E-04	0.000 %	1.60063E-07	32.3050	1.19838E-01	0.9993
64	9.76562E+00	1.78234E-03	0.001 %	1.99928E-04	0.001 %	1.85793E-07	33.3335	1.12145E-01	0.9995
69	1.05286E+01	1.89905E-03	0.001 %	2.03836E-04	0.001 %	2.01855E-07	31.5728	1.07324E-01	0.9998
74	1.12915E+01	2.11759E-03	0.001 %	2.28890E-04	0.001 %	2.52719E-07	33.0718	1.08064E-01	0.9995
79	1.20544E+01	2.04560E-03	0.001 %	2.15348E-04	0.001 %	2.29697E-07	34.4615	1.05255E-01	0.9995
84	1.28174E+01	1.92588E-03	0.001 %	1.96064E-04	0.001 %	1.96881E-07	36.4824	1.01783E-01	0.9996
89	1.35803E+01	1.83122E-03	0.001 %	1.81897E-04	0.000 %	1.73700E-07	37.2735	9.93222E-02	0.9998
94	1.43433E+01	1.91977E-03	0.001 %	1.82006E-04	0.000 %	1.82219E-07	39.0102	9.48032E-02	0.9999
99	1.51062E+01	1.91393E-03	0.001 %	1.72965E-04	0.000 %	1.72542E-07	39.2671	9.03697E-02	1.0000
104	1.58691E+01	2.18742E-03	0.001 %	1.84892E-04	0.000 %	2.10917E-07	38.5620	8.45237E-02	1.0000
109	1.66321E+01	2.31797E-03	0.001 %	1.88312E-04	0.000 %	2.27641E-07	35.7123	8.12386E-02	1.0000
114	1.73950E+01	2.24892E-03	0.001 %	1.82859E-04	0.000 %	2.14459E-07	32.5861	8.13069E-02	0.9999
119	1.81580E+01	2.15024E-03	0.001 %	1.80367E-04	0.000 %	2.02259E-07	31.3597	8.38814E-02	1.0000
124	1.89209E+01	2.20061E-03	0.001 %	1.86330E-04	0.000 %	2.13839E-07	30.6302	8.46703E-02	1.0000
129	1.96838E+01	2.36329E-03	0.001 %	2.07225E-04	0.001 %	2.55400E-07	29.9690	8.76834E-02	1.0000
134	2.04468E+01	2.55972E-03	0.001 %	2.35435E-04	0.001 %	3.14282E-07	31.5526	9.19736E-02	0.9999
139	2.12097E+01	2.83660E-03	0.002 %	2.60506E-04	0.001 %	3.85376E-07	33.3531	9.18370E-02	1.0000
144	2.19727E+01	3.14855E-03	0.002 %	2.85658E-04	0.001 %	4.69053E-07	34.5193	9.07260E-02	1.0000
149	2.27356E+01	3.37616E-03	0.002 %	3.05820E-04	0.001 %	5.38465E-07	35.0998	9.05818E-02	1.0000
154	2.34985E+01	3.76531E-03	0.003 %	3.40590E-04	0.002 %	5.68809E-07	35.7686	9.04545E-02	1.0000
159	2.42615E+01	4.10030E-03	0.004 %	3.69552E-04	0.002 %	7.90241E-07	36.5998	9.01279E-02	1.0000
164	2.50244E+01	3.95571E-03	0.003 %	3.55694E-04	0.002 %	7.35642E-07	37.1641	8.96923E-02	1.0000
169	2.57874E+01	4.38563E-03	0.004 %	3.93882E-04	0.002 %	9.01087E-07	37.5125	8.97913E-02	1.0000
174	2.65503E+01	4.80307E-03	0.005 %	4.32132E-04	0.003 %	1.08259E-06	37.9727	8.99825E-02	1.0000
179	2.73132E+01	5.22219E-03	0.006 %	4.74197E-04	0.003 %	1.29122E-06	38.5895	9.07870E-02	1.0000
184	2.80762E+01	5.39213E-03	0.006 %	4.94413E-04	0.003 %	1.39033E-06	39.4404	9.16913E-02	1.0000
189	2.88391E+01	5.71022E-03	0.007 %	5.30613E-04	0.004 %	1.58013E-06	41.1038	9.29219E-02	1.0000
194	2.96020E+01	5.98804E-03	0.008 %	5.71858E-04	0.004 %	1.78235E-06	40.8410	9.53130E-02	0.9961

199	3.03650E+01	5.21564E-03	0.008 %	5.71904E-04	0.004 %	1.85387E-06	45.3090	9.20102E-02	1.0000
204	3.11275E+01	5.13511E-03	0.008 %	5.54954E-04	0.004 %	1.77590E-06	46.5853	9.04405E-02	1.0000
209	3.18900E+01	5.63553E-03	0.007 %	5.02762E-04	0.003 %	1.49074E-06	47.7572	8.84282E-02	1.0000
214	3.26533E+01	5.37138E-03	0.006 %	4.64825E-04	0.003 %	1.30210E-06	48.7370	8.65371E-02	1.0000
219	3.34167E+01	5.44128E-03	0.006 %	4.63608E-04	0.003 %	1.31560E-06	49.2408	8.52020E-02	1.0000
224	3.41797E+01	5.66450E-03	0.007 %	4.74336E-04	0.003 %	1.40125E-06	49.8481	8.37381E-02	1.0000
229	3.49426E+01	5.72287E-03	0.007 %	4.69079E-04	0.003 %	1.40000E-06	50.7172	8.19653E-02	1.0000
234	3.57055E+01	5.39458E-03	0.005 %	4.28804E-04	0.002 %	1.20533E-06	51.1111	7.94877E-02	1.0000
239	3.64685E+01	4.93317E-03	0.005 %	3.85205E-04	0.002 %	1.00303E-06	50.8071	7.71461E-02	1.0000
244	3.72314E+01	4.63447E-03	0.005 %	3.54452E-04	0.002 %	8.67737E-07	49.7309	7.54998E-02	1.0000
249	3.79944E+01	4.59751E-03	0.004 %	3.45167E-04	0.002 %	8.27602E-07	48.5454	7.50768E-02	1.0000
254	3.87573E+01	4.27144E-03	0.004 %	3.22363E-04	0.001 %	7.18107E-07	47.6813	7.54694E-02	1.0000
259	3.95203E+01	3.85978E-03	0.003 %	2.92887E-04	0.001 %	5.89565E-07	46.9251	7.58816E-02	1.0000
264	4.02832E+01	3.30804E-03	0.002 %	2.54947E-04	0.001 %	4.39933E-07	46.5306	7.70687E-02	1.0000
269	4.10461E+01	3.07752E-03	0.002 %	2.40693E-04	0.001 %	3.86560E-07	46.9018	7.81594E-02	1.0000
274	4.18091E+01	2.94705E-03	0.002 %	2.35073E-04	0.001 %	3.61303E-07	47.2207	7.97575E-02	1.0000
279	4.25720E+01	2.69028E-03	0.002 %	2.18056E-04	0.001 %	3.05940E-07	48.1278	8.10531E-02	1.0000
284	4.33350E+01	2.38715E-03	0.001 %	1.96060E-04	0.001 %	2.44084E-07	49.3144	8.21315E-02	1.0000
289	4.40979E+01	2.01803E-03	0.001 %	1.66567E-04	0.000 %	1.75302E-07	50.7558	8.25391E-02	1.0000
294	4.48608E+01	1.70574E-03	0.001 %	1.40717E-04	0.000 %	1.25178E-07	51.8427	8.24963E-02	1.0000
299	4.56238E+01	1.56389E-03	0.001 %	1.29726E-04	0.000 %	1.05804E-07	52.9504	8.29505E-02	1.0000
304	4.63867E+01	1.57105E-03	0.001 %	1.30449E-04	0.000 %	1.06881E-07	54.1906	8.30327E-02	1.0000
309	4.71497E+01	1.46930E-03	0.000 %	1.21983E-04	0.000 %	9.34713E-08	55.1792	8.30210E-02	1.0000
314	4.79126E+01	1.02743E-03	0.000 %	8.57676E-05	0.000 %	4.59561E-08	55.8713	8.34767E-02	1.0000
319	4.86755E+01	3.73300E-04	0.000 %	3.14301E-05	0.000 %	6.11689E-09	56.6698	8.41677E-02	0.9993
324	4.94385E+01	9.11598E-05	0.000 %	7.83041E-06	0.000 %	3.71898E-10	57.5995	8.58117E-02	0.9980
329	5.02014E+01	5.92158E-05	0.000 %	5.17522E-06	0.000 %	1.59004E-10	59.9296	8.59487E-02	0.9893
334	5.09644E+01	5.34504E-05	0.000 %	4.26883E-06	0.000 %	1.18513E-10	60.3518	7.95395E-02	0.9919
339	5.17273E+01	4.74979E-05	0.000 %	3.85090E-06	0.000 %	9.48264E-11	60.5661	8.05954E-02	0.9882
344	5.24902E+01	4.72003E-05	0.000 %	3.78827E-06	0.000 %	9.27077E-11	62.6157	7.97915E-02	0.9884
349	5.32532E+01	4.90192E-05	0.000 %	4.20697E-06	0.000 %	1.06125E-10	59.6672	8.46876E-02	0.9737
354	5.40161E+01	5.04788E-05	0.000 %	4.78834E-06	0.000 %	1.49964E-10	62.9214	7.36150E-02	0.9860
359	5.47790E+01	5.09718E-05	0.000 %	4.78534E-06	0.000 %	1.51201E-10	58.5350	7.79879E-02	0.9874
364	5.55420E+01	3.96027E-05	0.000 %	3.28733E-06	0.000 %	6.72721E-11	55.9176	8.22460E-02	0.9817
369	5.63049E+01	5.51108E-05	0.000 %	4.15041E-06	0.000 %	1.18954E-10	60.9743	7.50992E-02	0.9944
374	5.70679E+01	5.15016E-05	0.000 %	4.03849E-06	0.000 %	1.08074E-10	60.3685	7.81287E-02	0.9927
379	5.78308E+01	6.44938E-05	0.000 %	4.96824E-06	0.000 %	1.66787E-10	60.3691	7.68876E-02	0.9962
384	5.85937E+01	6.97598E-05	0.000 %	5.54118E-06	0.000 %	2.01695E-10	59.6955	7.99957E-02	0.9957
389	5.93567E+01	7.07103E-05	0.000 %	5.68595E-06	0.000 %	2.08723E-10	58.0149	8.00470E-02	0.9909
394	6.01196E+01	9.31882E-05	0.000 %	7.57107E-06	0.000 %	3.65324E-10	58.9014	8.05653E-02	0.9858
399	6.08825E+01	6.84518E-05	0.000 %	5.92143E-06	0.000 %	2.11235E-10	54.9010	8.54427E-02	0.9986
404	6.16455E+01	8.77818E-05	0.000 %	7.65791E-06	0.000 %	3.49963E-10	57.8876	8.70856E-02	0.9965
409	6.24084E+01	7.76835E-05	0.000 %	6.80721E-06	0.000 %	2.75208E-10	58.7933	8.74449E-02	0.9958
414	6.31714E+01	7.53542E-05	0.000 %	6.51990E-06	0.000 %	2.59163E-10	56.0830	8.75168E-02	0.9927
419	6.39343E+01	7.14632E-05	0.000 %	6.41244E-06	0.000 %	2.38053E-10	56.7117	8.94047E-02	0.9925
424	6.46973E+01	7.31727E-05	0.000 %	7.18544E-06	0.000 %	2.72982E-10	56.8577	9.77611E-02	0.9911
429	6.54602E+01	6.86307E-05	0.000 %	7.14816E-06	0.000 %	2.54984E-10	60.8629	1.03802E-01	0.9933
434	6.62231E+01	7.52393E-05	0.000 %	7.98510E-06	0.000 %	3.12444E-10	64.6682	1.05831E-01	0.9944
439	6.69861E+01	8.55010E-05	0.000 %	8.66494E-06	0.000 %	3.85595E-10	65.3234	1.01139E-01	0.9960
444	6.77490E+01	1.01014E-04	0.000 %	1.01761E-05	0.000 %	5.35025E-10	65.7626	1.00541E-01	0.9961
********************		0.00000E+00	0.000 %	0.00000E+00	0.000 %	************			
********************									
********************			0.000 %	***********	0.000 %	************			
********************									

SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DIASSM USER NAME................. GLM
SET - .SV, COMMENTS............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE FFID=621 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 54 CHAN = 42

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM (511-AP1V)	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF NEWTONS (522-PIFO)	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	6.04884E-03	0.008 %	3.75459E+01	0.000 %	4.79967E-02	-123.4482	2.51534E+03	0.1642
9	1.37329E+00	2.09925E-03	0.001 %	6.27024E+01	0.001 %	2.46064E-02	-210.9721	1.07065E+04	0.1285
14	2.13623E+00	9.03653E-04	0.000 %	1.05583E+02	0.004 %	1.74198E-02	-114.7501	4.09044E+04	0.1225
19	2.39917E+00	5.55410E-04	0.000 %	1.15164E+02	0.004 %	2.25955E-02	175.2142	1.40451E+05	0.4588
24	3.66211E+00	7.13707E-04	0.000 %	1.50009E+02	0.007 %	4.84549E-02	200.7422	1.82401E+05	0.7531
29	4.42505E+00	7.06548E-04	0.000 %	2.36815E+02	0.018 %	9.11180E-02	213.7047	3.11576E+05	0.8642
34	5.18799E+00	8.37867E-04	0.000 %	2.02181E+02	0.013 %	8.74709E-02	222.6556	2.38915E+05	0.9803
39	5.95093E+00	9.79394E-04	0.000 %	3.03295E+02	0.030 %	1.51228E-01	216.2764	3.02616E+05	0.9539
44	6.71387E+00	1.17014E-03	0.000 %	3.19848E+02	0.033 %	1.93381E-01	217.0203	2.70811E+05	0.9816
49	7.47681E+00	1.38469E-03	0.000 %	3.42754E+02	0.038 %	2.45074E-01	209.7905	2.45086E+05	0.9803
54	8.23975E+00	1.45211E-03	0.000 %	3.85564E+02	0.048 %	2.93403E-01	218.2729	2.53173E+05	0.9960
59	9.00269E+00	1.60034E-03	0.001 %	4.20692E+02	0.057 %	3.50900E-01	215.4857	2.52718E+05	0.9988
64	9.76562E+00	1.78234E-03	0.001 %	5.00734E+02	0.081 %	4.64765E-01	219.0747	2.80534E+05	0.9971
69	1.05286E+01	1.89905E-03	0.001 %	5.14967E+02	0.086 %	5.09210E-01	220.1480	2.70741E+05	0.9968
74	1.12915E+01	2.11759E-03	0.001 %	5.76713E+02	0.108 %	6.35247E-01	221.1960	2.71637E+05	0.9948
79	1.20544E+01	2.04550E-03	0.001 %	5.55784E+02	0.104 %	5.03299E-01	223.1350	2.76452E+05	0.9990
84	1.28174E+01	1.92588E-03	0.001 %	5.19880E+02	0.088 %	5.21955E-01	227.5209	2.53839E+05	0.9992
89	1.35803E+01	1.83122E-03	0.001 %	5.09324E+02	0.084 %	4.86207E-01	227.1721	2.78016E+05	0.9992
94	1.43433E+01	1.91977E-03	0.001 %	5.18362E+02	0.087 %	5.18410E-01	230.7387	2.59715E+05	0.9978
99	1.51062E+01	1.91393E-03	0.001 %	5.39494E+02	0.094 %	5.38225E-01	232.1786	2.81735E+05	0.9990
104	1.58691E+01	2.18742E-03	0.001 %	6.04675E+02	0.119 %	5.89451E-01	235.8011	2.76294E+05	0.9990
109	1.66321E+01	2.31797E-03	0.001 %	6.52302E+02	0.138 %	7.88257E-01	238.3235	2.81307E+05	0.9993
114	1.73950E+01	2.24392E-03	0.001 %	6.31868E+02	0.130 %	7.40845E-01	241.4792	2.80873E+05	0.9993
119	1.81580E+01	2.15024E-03	0.001 %	5.91487E+02	0.114 %	5.63100E-01	244.0490	2.75002E+05	0.9994
124	1.89209E+01	2.20061E-03	0.001 %	6.14776E+02	0.123 %	7.05252E-01	246.1524	2.79247E+05	0.9991
129	1.96838E+01	2.36329E-03	0.001 %	6.59358E+02	0.141 %	8.12373E-01	249.2158	2.78902E+05	0.9993
134	2.04468E+01	2.55972E-03	0.001 %	7.28163E+02	0.172 %	9.71642E-01	251.3459	2.84348E+05	0.9991
139	2.12097E+01	2.83560E-03	0.002 %	7.90753E+02	0.203 %	1.16967E+00	254.0985	2.78739E+05	0.9998
144	2.19727E+01	3.14855E-03	0.002 %	8.78988E+02	0.251 %	1.44329E+00	256.5081	2.79165E+05	0.9999
149	2.27356E+01	3.37516E-03	0.002 %	9.57814E+02	0.298 %	1.68630E+00	258.6250	2.83674E+05	0.9998
154	2.34985E+01	3.76531E-03	0.003 %	1.06793E+03	0.370 %	2.09700E+00	261.9430	2.83613E+05	0.9999
159	2.42615E+01	4.10930E-03	0.004 %	1.16304E+03	0.439 %	2.48696E+00	264.9481	2.83641E+05	0.9999
164	2.50244E+01	3.96571E-03	0.003 %	1.14276E+03	0.424 %	2.36335E+00	268.0678	2.88150E+05	0.9999
169	2.57874E+01	4.38563E-03	0.004 %	1.24775E+03	0.505 %	2.85439E+00	271.7924	2.84433E+05	0.9999
174	2.65503E+01	4.80337E-03	0.005 %	1.37538E+03	0.614 %	3.44509E+00	275.0288	2.86347E+05	0.9999
179	2.73132E+01	5.22219E-03	0.006 %	1.48865E+03	0.719 %	4.05413E+00	278.2892	2.85055E+05	0.9999
184	2.30762E+01	5.39213E-03	0.006 %	1.54355E+03	0.780 %	4.35714E+00	281.4481	2.87350E+05	0.9998
189	2.88391E+01	5.71022E-03	0.007 %	1.65078E+03	0.885 %	4.91592E+00	285.2083	2.89088E+05	1.0000
194	2.96020E+01	5.98804E-03	0.008 %	1.72928E+03	0.971 %	5.40022E+00	288.7538	2.88783E+05	1.0000

* 199*	3.03650E+01*	5.21554E-03	0.008 %	* 1.78812E+03	1.038 % *	5.79594E+00	291.8365	2.87661E+05	0.9999 *
* 204*	3.11279E+01*	5.13611E-03	0.008 %	* 1.78894E+03	1.039 % *	5.72457E+00	295.7815	2.91532E+05	0.9999 *
* 209*	3.18909E+01*	5.63553E-03	0.007 %	* 1.56261E+03	0.897 % *	4.92975E+00	299.6219	2.92424E+05	1.0000 *
* 214*	3.26538E+01*	5.37138E-03	0.006 %	* 1.58743E+03	0.818 % *	4.44670E+00	303.3028	2.95527E+03	0.9999 *
* 219*	3.34167E+01*	5.44128E-03	0.006 %	* 1.50981E+03	0.841 % *	4.56810E+00	307.5503	2.95844E+05	1.0000 *
* 224*	3.41797E+01*	5.65450E-03	0.007 %	* 1.58193E+03	0.918 % *	4.96860E+00	311.7654	2.96921E+05	1.0000 *
* 229*	3.49426E+01*	5.72287E-03	0.007 %	* 1.70919E+03	0.948 % *	5.10110E+00	316.1359	2.98652E+05	1.0000 *
* 234*	3.57055E+01*	5.39438E-03	0.006 %	* 1.60911E+03	0.841 % *	4.52692E+00	320.5308	2.98275E+05	1.0000 *
* 239*	3.64685E+01*	4.93317E-03	0.005 %	* 1.48313E+03	0.714 % *	3.86195E+00	325.2438	2.97019E+05	0.9999 *
* 244*	3.72314E+01*	4.69447E-03	0.005 %	* 1.38709E+03	0.625 % *	3.39582E+00	330.1200	2.95463E+05	0.9999 *
* 249*	3.79944E+01*	4.59751E-03	0.004 %	* 1.33718E+03	0.580 % *	3.20605E+00	334.5953	2.90840E+05	0.9999 *
* 254*	3.87573E+01*	4.27144E-03	0.004 %	* 1.23381E+03	0.494 % *	2.74842E+00	339.2751	2.88845E+05	1.0000 *
* 259*	3.95203E+01*	3.85978E-03	0.003 %	* 1.10302E+03	0.395 % *	2.22030E+00	343.6782	2.85770E+05	1.0000 *
* 264*	4.02832E+01*	3.30304E-03	0.002 %	* 9.45435E+02	0.290 % *	1.63102E+00	348.2975	2.85791E+05	0.9999 *
* 269*	4.10461E+01*	3.07952E-03	0.002 %	* 8.73757E+02	0.248 % *	1.40321E+00	352.5040	2.83719E+05	0.9999 *
* 274*	4.18091E+01*	2.94705E-03	0.002 %	* 8.29077E+02	0.223 % *	1.27419E+00	357.3857	2.81313E+05	0.9999 *
* 279*	4.25720E+01*	2.69028E-03	0.002 %	* 7.46212E+02	0.181 % *	1.04692E+00	2.0812	2.77363E+05	0.9999 *
* 284*	4.33350E+01*	2.38715E-03	0.001 %	* 6.50466E+02	0.142 % *	8.22188E-01	7.3825	2.75657E+05	0.9999 *
* 289*	4.40979E+01*	2.01803E-03	0.001 %	* 5.52770E+02	0.099 % *	5.81711E-01	12.8536	2.73893E+05	0.9998 *
* 294*	4.48608E+01*	1.70574E-03	0.001 %	* 4.57727E+02	0.068 % *	4.07143E-01	17.5024	2.58321E+05	0.9998 *
* 299*	4.56238E+01*	1.56389E-03	0.001 %	* 4.16167E+02	0.056 % *	3.39189E-01	23.1835	2.55924E+05	0.9986 *
* 304*	4.63867E+01*	1.57105E-03	0.001 %	* 3.99002E+02	0.052 % *	3.26873E-01	29.8943	2.53937E+05	0.9997 *
* 309*	4.71497E+01*	1.46930E-03	0.000 %	* 3.58319E+02	0.044 % *	2.82199E-01	36.2725	2.50647E+05	0.9998 *
* 314*	4.79126E+01*	1.02743E-03	0.000 %	* 2.36915E+02	0.021 % *	1.37591E-01	42.7286	2.49926E+05	0.9990 *
* 319*	4.86755E+01*	3.73300E-04	0.000 %	* 9.88265E+01	0.003 % *	1.92226E-02	49.1927	2.54501E+05	0.9982 *
* 324*	4.94385E+01*	3.11598E-05	0.000 %	* 2.30678E+01	0.000 % *	1.06651E-03	55.9150	2.45088E+05	0.9457 *
* 329*	5.02014E+01*	5.92158E-05	0.000 %	* 1.50577E+01	0.000 % *	4.43995E-04	67.6220	2.42792E+05	0.9115 *
* 334*	5.09644E+01*	5.34504E-05	0.000 %	* 1.27237E+01	0.000 % *	2.41313E-04	88.9757	1.51960E+05	0.4629 *
* 339*	5.17273E+01*	4.74979E-05	0.000 %	* 1.14166E+01	0.000 % *	2.67832E-04	88.3828	2.27637E+05	0.8969 *
* 344*	5.24902E+01*	4.72003E-05	0.000 %	* 2.56041E+01	0.000 % *	1.86639E-04	60.3546	1.60636E+05	0.0877 *
* 349*	5.32532E+01*	4.90192E-05	0.000 %	* 1.86733E+01	0.000 % *	3.40450E-04	131.1503	2.71676E+05	0.5086 *
* 354*	5.40161E+01*	5.04788E-05	0.000 %	* 7.33727E+00	0.000 % *	1.94280E-04	79.9008	1.01848E+05	0.7048 *
* 359*	5.47790E+01*	5.09718E-05	0.000 %	* 1.46579E+01	0.000 % *	2.20884E-04	68.3188	1.13930E+05	0.2245 *
* 364*	5.55420E+01*	3.96027E-05	0.000 %	* 7.55002E+00	0.000 % *	1.16354E-04	96.0658	1.42253E+05	0.5568 *
* 369*	5.63049E+01*	5.51108E-05	0.000 %	* 4.56999E+00	0.000 % *	9.98429E-05	132.2367	6.30338E+04	0.5778 *
* 374*	5.70679E+01*	5.15016E-05	0.000 %	* 5.70984E+00	0.000 % *	1.26620E-04	141.4061	9.15356E+04	0.6817 *
* 379*	5.78308E+01*	6.44938E-05	0.000 %	* 4.75962E+00	0.000 % *	1.06745E-04	158.1478	4.92084E+04	0.4446 *
* 384*	5.85937E+01*	5.99598E-05	0.000 %	* 4.44625E+00	0.000 % *	1.43895E-04	160.1046	5.53584E+04	0.7866 *
* 389*	5.93567E+01*	7.07103E-05	0.000 %	* 2.76889E+01	0.000 % *	2.40011E-04	150.3583	9.20441E+04	0.0553 *
* 394*	6.01196E+01*	9.31882E-05	0.000 %	* 8.29479E+01	0.002 % *	7.01124E-04	258.7057	1.54811E+05	0.0302 *
* 399*	6.08825E+01*	6.84518E-05	0.000 %	* 4.22472E+00	0.000 % *	1.09765E-04	85.3075	4.49185E+04	0.5297 *
* 404*	6.16455E+01*	8.77818E-05	0.000 %	* 5.15929E+00	0.000 % *	1.88919E-04	55.5508	4.70108E+04	0.6398 *
* 409*	6.24084E+01*	7.76835E-05	0.000 %	* 4.88561E+00	0.000 % *	1.55325E-04	49.3661	4.93530E+04	0.6158 *
* 414*	6.31714E+01*	7.53542E-05	0.000 %	* 9.75515E+00	0.000 % *	1.88183E-04	-12.0632	6.35460E+04	0.2409 *
* 419*	6.39343E+01*	7.14532E-05	0.000 %	* 3.50225E+00	0.000 % *	1.23083E-04	84.5478	4.52266E+04	0.8408 *
* 424*	6.46973E+01*	7.31727E-05	0.000 %	* 4.76649E+00	0.000 % *	1.32203E-04	98.9338	4.73450E+04	0.5283 *
* 429*	6.54602E+01*	6.86307E-05	0.000 %	* 2.97280E+00	0.000 % *	9.48499E-05	79.4100	3.86127E+04	0.7946 *
* 434*	6.62231E+01*	7.52393E-05	0.000 %	* 6.01324E+00	0.000 % *	2.19607E-04	66.8388	7.43854E+04	0.8663 *
* 439*	6.69861E+01*	8.55010E-05	0.000 %	* 5.17530E+00	0.000 % *	2.02872E-04	97.2993	5.32121E+04	0.7728 *
* 444*	6.77490E+01*	1.01014E-04	0.000 %	* 6.53034E+00	0.000 % *	3.43769E-04	90.8159	5.45003E+04	0.9686 *
******	**************	0.00000E+00	0.000 %	* 0.00000E+00	0.000 %	**************	**************	**************	************
******	**************	**************	********	**************	**********	**************	**************	**************	************
******	**************	**************	0.000 %	************	0.000 %	**************	**************	**************	************
******	**************	**************	********	**************	**********	**************	**************	**************	************

```
SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JOASSN USER NAME.................GLM
SET - .SVS COMMENTS.............         INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004   RUNTITLE   FFID=621  30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000   ENDANALYSIS  :   VERTICAL PILE DISP AND FORCE DATA
SHOT =      2020  SEQNO =         54  CHAN =        42
```

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-INF4	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-PIFO	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.33302E+00	0.000 %	3.75459E+01	0.000 %	2.30213E+01	-146.1411	3.97359E+00	0.1244
9	1.37329E+00	1.94345E+01	0.001 %	6.27024E+01	0.001 %	3.08133E+02	194.4934	1.55631E+00	0.2339
14	2.13623E+00	8.33417E+01	0.011 %	1.05583E+02	0.004 %	3.82169E+03	187.0192	1.05502E+00	0.6935
19	2.89917E+00	1.24155E+02	0.027 %	1.15164E+02	0.004 %	6.91164E+03	170.2241	7.94485E-01	0.7939
24	3.66211E+00	1.69638E+02	0.047 %	1.50009E+02	0.007 %	1.29274E+04	187.3557	8.61376E-01	0.9483
29	4.42505E+00	1.98992E+02	0.065 %	2.36815E+02	0.018 %	2.35557E+04	195.9784	1.14077E+00	0.9183
34	5.18799E+00	2.30687E+02	0.087 %	2.02191E+02	0.013 %	2.40463E+04	203.8573	8.56441E-01	0.9773
39	5.95093E+00	2.66574E+02	0.116 %	3.03295E+02	0.030 %	4.13758E+04	200.5328	1.11645E+00	0.9629
44	6.71387E+00	3.11458E+02	0.159 %	3.19848E+02	0.033 %	5.15934E+04	204.7542	1.01982E+00	0.9862
49	7.47681E+00	3.51979E+02	0.203 %	3.42754E+02	0.038 %	5.24072E+04	200.8859	9.55896E-01	0.9838
54	8.23975E+00	3.74027E+02	0.229 %	3.85564E+02	0.048 %	7.51099E+04	211.8757	1.02949E+00	0.9974
59	9.00268E+00	4.14443E+02	0.281 %	4.20692E+02	0.057 %	9.08929E+04	211.7597	1.01468E+00	0.9992
64	9.76562E+00	4.57464E+02	0.342 %	5.00734E+02	0.081 %	1.19345E+05	215.8716	1.09351E+00	0.9980
69	1.05286E+01	4.81056E+02	0.379 %	5.14967E+02	0.086 %	1.29009E+05	218.4834	1.06896E+00	0.9971
74	1.12915E+01	5.31722E+02	0.463 %	5.76713E+02	0.108 %	1.59572E+05	220.4799	1.08222E+00	0.9956
79	1.20544E+01	5.10019E+02	0.426 %	5.55784E+02	0.104 %	1.50442E+05	223.4842	1.10898E+00	0.9994
84	1.28174E+01	4.77879E+02	0.374 %	5.19880E+02	0.089 %	1.29515E+05	229.1439	1.08746E+00	0.9992
89	1.35803E+01	4.45576E+02	0.325 %	5.09324E+02	0.084 %	1.18338E+05	229.8073	1.14239E+00	0.9993
94	1.43433E+01	4.65119E+02	0.354 %	5.18362E+02	0.087 %	1.25627E+05	234.0850	1.11349E+00	0.9982
99	1.51062E+01	4.55794E+02	0.340 %	5.39494E+02	0.094 %	1.28173E+05	236.3287	1.18301E+00	0.9989
104	1.58691E+01	5.08953E+02	0.424 %	6.04575E+02	0.119 %	1.60415E+05	240.2495	1.18747E+00	0.9990
109	1.66321E+01	5.26732E+02	0.454 %	6.52302E+02	0.138 %	1.79135E+05	243.3871	1.23803E+00	0.9994
114	1.73950E+01	4.98115E+02	0.406 %	6.31868E+02	0.130 %	1.64089E+05	247.4557	1.26808E+00	0.9993
119	1.81580E+01	4.64108E+02	0.352 %	5.91487E+02	0.114 %	1.43118E+05	251.1594	1.27404E+00	0.9993
124	1.89209E+01	4.62417E+02	0.350 %	6.14776E+02	0.123 %	1.48183E+05	254.1291	1.32883E+00	0.9990
129	1.96838E+01	4.79948E+02	0.377 %	6.59358E+02	0.141 %	1.64953E+05	258.0645	1.37314E+00	0.9990
134	2.04468E+01	5.09420E+02	0.425 %	7.28163E+02	0.172 %	1.93374E+05	261.1929	1.42882E+00	0.9992
139	2.12097E+01	5.39236E+02	0.476 %	7.90753E+02	0.203 %	2.22351E+05	264.7370	1.46626E+00	0.9998
144	2.19727E+01	5.77501E+02	0.546 %	8.78989E+02	0.251 %	2.64715E+05	268.3306	1.52196E+00	0.9999
149	2.2735 E+01	5.94557E+02	0.578 %	9.57804E+02	0.298 %	2.96863E+05	271.7022	1.61130E+00	0.9998
154	2.34985E+01	6.31613E+02	0.653 %	1.06793E+03	0.370 %	3.51764E+05	275.7704	1.69075E+00	0.9999
159	2.42615E+01	6.55305E+02	0.703 %	1.16304E+03	0.439 %	3.97450E+05	279.8041	1.77470E+00	0.9999
164	2.50244E+01	6.04748E+02	0.598 %	1.14276E+03	0.424 %	3.60394E+05	284.1638	1.88955E+00	0.9999
169	2.57874E+01	6.26334E+02	0.643 %	1.24775E+03	0.505 %	4.07883E+05	289.2580	1.99052E+00	1.0000
174	2.65503E+01	6.40920E+02	0.672 %	1.37538E+03	0.614 %	4.59703E+05	293.8255	2.14587E+00	0.9999
179	2.73132E+01	6.49194E+02	[illegible]	1.48863E+03	0.719 %	5.03981E+05	299.6131	2.29275E+00	0.9999
184	2.80762E+01	6.25962E+02	0.641 %	1.54955E+03	0.780 %	5.05785E+05	305.2396	2.47514E+00	0.9997
189	2.88391E+01	6.15486E+02	0.620 %	1.65078E+03	0.885 %	5.29850E+05	311.9607	2.68192E+00	0.9999
194	2.96020E+01	5.91918E+02	0.573 %	1.72928E+03	0.971 %	5.33722E+05	319.5500	2.92094E+00	0.9996

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199	3.03459E+01	5.74735E+02	0.340 %	1.78812E+03	1.038 %	5.35910E+05	326.3651	3.11095E+00	0.9998
204	3.11270E+01	5.28360E+02	0.458 %	1.78894E+03	1.039 %	4.93462E+05	334.8648	3.38172E+00	0.9998
209	3.18909E+01	4.58316E+02	0.344 %	1.56261E+03	0.897 %	3.97803E+05	344.0987	3.62349E+00	0.9999
214	3.26538E+01	4.03798E+02	0.247 %	1.38743E+03	0.818 %	3.34267E+05	353.7675	3.93035E+00	0.9998
219	3.34167E+01	3.76820E+02	0.232 %	1.60981E+03	0.841 %	3.16320E+05	5.1849	4.27158E+00	0.9998
224	3.41797E+01	3.63781E+02	0.217 %	1.68193E+03	0.918 %	3.19061E+05	17.9844	4.62299E+00	0.9998
229	3.49426E+01	3.52154E+02	0.203 %	1.70919E+03	0.948 %	3.13849E+05	32.1291	4.85274E+00	0.9997
234	3.57055E+01	3.25590E+02	0.174 %	1.50911E+03	0.841 %	2.73265E+05	46.2179	4.93976E+00	0.9997
239	3.64685E+01	3.04597E+02	0.152 %	1.48313E+03	0.714 %	2.35637E+05	61.8738	4.96673E+00	0.9995
244	3.72314E+01	2.99079E+02	0.146 %	1.38708E+03	0.625 %	2.16305E+05	77.7058	4.63688E+00	0.9996
249	3.79944E+01	3.15921E+02	0.163 %	1.33718E+03	0.580 %	2.20280E+05	92.7643	4.23202E+00	0.9997
254	3.87573E+01	3.26239E+02	0.174 %	1.23381E+03	0.494 %	2.09887E+05	106.0445	3.78131E+00	0.9997
259	3.95203E+01	3.32782E+02	0.181 %	1.10302E+03	0.395 %	1.91417E+05	117.0028	3.31430E+00	0.9999
264	4.02832E+01	3.21318E+02	0.169 %	9.45435E+02	0.290 %	1.58663E+05	126.3750	2.93755E+00	0.9998
269	4.10461E+01	3.38897E+02	0.188 %	8.73757E+02	0.248 %	1.54414E+05	134.7406	2.57799E+00	0.9998
274	4.18091E+01	3.62596E+02	0.215 %	8.29077E+02	0.223 %	1.56763E+05	142.7644	2.28627E+00	0.9998
279	4.25720E+01	3.65430E+02	0.218 %	7.46212E+02	0.181 %	1.42201E+05	149.4393	2.04185E+00	0.9998
284	4.33350E+01	3.55307E+02	0.207 %	6.60466E+02	0.142 %	1.22371E+05	156.5599	1.85867E+00	0.9998
289	4.40979E+01	3.26165E+02	0.174 %	5.52770E+02	0.099 %	9.40175E+04	163.5213	1.69459E+00	0.9998
294	4.48608E+01	2.98273E+02	0.146 %	4.57727E+02	0.068 %	7.11934E+04	169.8728	1.53441E+00	0.9998
299	4.56238E+01	2.95869E+02	0.143 %	4.16167E+02	0.056 %	5.41771E+04	176.9755	1.40576E+00	0.9988
304	4.63867E+01	3.20349E+02	0.158 %	3.99002E+02	0.052 %	6.66490E+04	185.1103	1.24531E+00	0.9997
309	4.71497E+01	3.21148E+02	0.169 %	3.58319E+02	0.044 %	5.16780E+04	193.0017	1.14670E+00	0.9997
314	4.79126E+01	2.39298E+02	0.094 %	2.56915E+02	0.021 %	3.20473E+04	200.9966	1.07310E+00	0.9990
319	4.86755E+01	9.19773E+01	0.014 %	9.88265E+01	0.003 %	4.73612E+03	208.9147	1.07347E+00	0.9982
324	4.94385E+01	2.40540E+01	0.001 %	2.30678E+01	0.000 %	2.80412E+02	215.7842	9.29293E-01	0.9390
329	5.02014E+01	1.69897E+01	0.000 %	1.50577E+01	0.000 %	1.25869E+02	228.0818	8.36135E-01	0.8900
334	5.09644E+01	1.60171E+01	0.000 %	1.27237E+01	0.000 %	7.05493E+01	253.2835	5.27304E-01	0.4406
339	5.17273E+01	1.48900E+01	0.000 %	1.14166E+01	0.000 %	8.47745E+01	249.3831	7.33174E-01	0.9144
344	5.24902E+01	1.51883E+01	0.000 %	2.36041E+01	0.000 %	5.82970E+01	221.2861	4.84569E-01	0.0826
349	5.32532E+01	1.71359E+01	0.000 %	1.86733E+01	0.000 %	1.19084E+02	294.5955	7.77623E-01	0.5092
354	5.40161E+01	2.27564E+01	0.001 %	7.33727E+00	0.000 %	7.45953E+01	242.3238	2.76208E-01	0.7337
359	5.47790E+01	2.38350E+01	0.001 %	1.46579E+01	0.000 %	8.84789E+01	231.3925	2.98634E-01	0.2358
364	5.55420E+01	1.73174E+01	0.000 %	7.55002E+00	0.000 %	5.15202E+01	265.3319	3.29414E-01	0.5707
369	5.63049E+01	2.36593E+01	0.001 %	4.56999E+00	0.000 %	4.34812E+01	301.8828	1.48946E-01	0.5945
374	5.70679E+01	2.33013E+01	0.001 %	5.70984E+00	0.000 %	5.86444E+01	309.2200	2.07108E-01	0.7143
379	5.78308E+01	2.97601E+01	0.001 %	4.75962E+00	0.000 %	5.04992E+01	326.8181	1.09332E-01	0.4673
384	5.85937E+01	3.45502E+01	0.002 %	4.44625E+00	0.000 %	7.07335E+01	329.1143	1.13554E-01	0.7791
389	5.93567E+01	3.76406E+01	0.002 %	2.76888E+01	0.000 %	9.25940E+01	224.7902	1.25314E-01	0.0290
394	6.01196E+01	4.84170E+01	0.004 %	8.29479E+01	0.002 %	2.65951E+02	25.0714	2.17539E-01	0.0161
399	6.08826E+01	3.84496E+01	0.002 %	4.22472E+00	0.000 %	5.04904E+01	-104.5196	7.84573E-02	0.5099
404	6.16455E+01	5.04666E+01	0.004 %	5.15929E+00	0.000 %	1.05895E+02	-134.0962	7.97260E-02	0.6082
409	6.24084E+01	4.71486E+01	0.004 %	4.88561E+00	0.000 %	9.46235E+01	-139.6196	8.16188E-02	0.6204
414	6.31714E+01	4.67858E+01	0.004 %	9.75515E+00	0.000 %	1.20399E+02	-203.7556	1.05464E-01	0.2559
419	6.39343E+01	4.54306E+01	0.003 %	3.60225E+00	0.000 %	7.66245E+01	-104.5394	7.11871E-02	0.8060
424	6.46973E+01	4.83526E+01	0.004 %	4.76649E+00	0.000 %	8.74582E+01	-90.5645	7.16988E-02	0.5292
429	6.54602E+01	4.74533E+01	0.004 %	2.97280E+00	0.000 %	5.46733E+01	-110.4617	5.30479E-02	0.7724
434	6.62231E+01	5.32256E+01	0.005 %	6.01324E+00	0.000 %	1.56447E+02	-124.2696	1.05891E-01	0.8785
439	6.69861E+01	6.07947E+01	0.006 %	5.17530E+00	0.000 %	1.42942E+02	-93.4495	7.41582E-02	0.7589
444	6.77490E+01	7.38953E+01	0.009 %	6.53034E+00	0.000 %	2.52569E+02	-98.5293	8.86904E-02	0.9770
******	******	0.00000E+00	0.000 %	0.00000E+00	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******
******	******	******	0.000 %	******	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******

SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASGI USER NAME.................. JLM
SET - .SVS COMMENTS............ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE PFID=621 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 1 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 55 CHAN = 43

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-PIF0	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-PIF1	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	8.56788E+03	2.307 %	8.47547E+04	27.4114	1.15284E+02	0.2552
9	1.37329E+00	6.27024E+01	0.001 %	1.19477E+04	4.485 %	1.87945E+05	-120.5788	9.15627E+01	0.2314
14	2.13623E+00	1.05583E+02	0.004 %	7.70763E+03	1.867 %	1.49055E+05	48.4954	2.56382E+01	0.1233
19	2.89917E+00	1.15164E+02	0.004 %	9.71289E+03	2.964 %	2.74493E+05	-152.0455	3.96857E+01	0.2214
24	3.66211E+00	1.50009E+02	0.007 %	8.57521E+03	2.311 %	1.21500E+05	-141.1279	1.03616E+01	0.0329
29	4.42505E+00	2.36815E+02	0.018 %	5.24305E+03	0.864 %	2.10483E+04	37.0231	7.19679E-01	0.0011
34	5.18799E+00	2.02181E+02	0.013 %	3.30113E+03	0.454 %	1.18834E+05	-49.5140	5.57432E+00	0.0879
39	5.95093E+00	3.03295E+02	0.030 %	2.95412E+03	0.274 %	1.20588E+05	64.0888	2.31363E+00	0.0666
44	6.71387E+00	3.19848E+02	0.033 %	4.72652E+03	0.702 %	1.33861E+05	317.4934	2.50898E+00	0.0288
49	7.47681E+00	3.42754E+02	0.038 %	2.87465E+03	0.260 %	1.36309E+05	253.0978	2.22479E+00	0.0704
54	8.23975E+00	3.85564E+02	0.048 %	2.42508E+03	0.185 %	9.58674E+04	341.0697	1.23654E+00	0.0387
59	9.00268E+00	4.20592E+02	0.057 %	1.34826E+03	0.107 %	1.84815E+05	4.2806	2.30236E+00	0.2077
64	9.76562E+00	5.00734E+02	0.081 %	2.47472E+03	0.192 %	8.99060E+04	69.3282	6.87550E-01	0.0194
69	1.05286E+01	5.14967E+02	0.086 %	3.53874E+03	0.416 %	1.23461E+05	-99.2381	8.92693E-01	0.0160
74	1.12915E+01	5.76713E+02	0.108 %	2.87382E+03	0.260 %	1.92695E+05	-17.1357	1.11091E+00	0.0497
79	1.20544E+01	5.65784E+02	0.104 %	1.90682E+03	0.114 %	9.12795E+04	28.4228	5.46767E-01	0.0263
84	1.28174E+01	5.19330E+02	0.088 %	2.38629E+03	0.179 %	1.68185E+05	-41.5509	1.19320E+00	0.0676
89	1.35803E+01	5.03324E+02	0.084 %	3.05886E+03	0.294 %	1.23755E+05	-23.7265	9.14753E-01	0.0232
94	1.43433E+01	5.18362E+02	0.087 %	2.07822E+03	0.136 %	2.34373E+05	12.4029	1.67252E+00	0.1740
99	1.51062E+01	5.39494E+02	0.094 %	2.12282E+03	0.142 %	2.17610E+05	46.2536	1.43363E+00	0.1327
104	1.58691E+01	6.04676E+02	0.119 %	1.84221E+03	0.107 %	1.79344E+05	1.6932	9.40528E-01	0.0953
109	1.66321E+01	6.52302E+02	0.138 %	2.37170E+03	0.177 %	8.11555E+04	41.4363	3.65722E-01	0.0101
114	1.73950E+01	6.31868E+02	0.130 %	2.28663E+03	0.164 %	2.67375E+05	-356.3769	1.28410E+00	0.1259
119	1.81580E+01	5.91487E+02	0.114 %	1.45095E+03	0.066 %	5.48222E+04	-97.1292	3.35273E-01	0.0210
124	1.89209E+01	6.14776E+02	0.123 %	1.33746E+03	0.056 %	1.08129E+05	-121.3599	5.48576E-01	0.0636
129	1.96838E+01	6.59358E+02	0.141 %	1.58995E+03	0.079 %	3.10460E+05	24.8876	1.36928E+00	0.3224
134	2.04468E+01	7.28163E+02	0.172 %	1.19757E+03	0.045 %	2.26027E+05	-22.7087	8.17396E-01	0.2470
139	2.12097E+01	7.90753E+02	0.203 %	1.59683E+03	0.080 %	4.75003E+05	10.6828	1.45661E+00	0.5203
144	2.19727E+01	8.78988E+02	0.251 %	2.48103E+03	0.193 %	5.39679E+05	-21.5920	1.58755E+00	0.3163
149	2.27356E+01	9.57304E+02	0.298 %	1.40050E+03	0.062 %	3.39849E+05	25.1392	7.10335E-01	0.2360
154	2.34985E+01	1.06793E+03	0.370 %	2.07337E+03	0.135 %	7.26001E+05	-16.9858	1.22062E+00	0.3953
159	2.42615E+01	1.16304E+03	0.439 %	1.80520E+03	0.102 %	8.04662E+05	4.6230	1.14065E+00	0.5401
164	2.50244E+01	1.14276E+03	0.424 %	1.55653E+03	0.076 %	8.02150E+05	-13.9411	1.17782E+00	0.7477
169	2.57874E+01	1.24775E+03	0.505 %	1.86721E+03	0.110 %	9.92213E+05	14.0259	1.22202E+00	0.6668
174	2.65503E+01	1.37338E+03	0.614 %	1.63433E+03	0.084 %	1.01465E+06	24.3362	1.02851E+00	0.7490
179	2.73132E+01	1.48365E+03	0.719 %	1.50316E+03	0.071 %	9.51714E+05	22.7800	8.23481E-01	0.6651
184	2.80762E+01	1.54955E+03	0.780 %	2.52771E+03	0.217 %	1.73693E+06	-2.5682	1.38708E+00	0.6590
189	2.88391E+01	1.65078E+03	0.885 %	1.76016E+03	0.097 %	1.30931E+06	23.5187	9.21284E-01	0.7466
194	2.96020E+01	1.72928E+03	0.971 %	2.51262E+03	0.214 %	2.01953E+06	-16.2684	1.29498E+00	0.7347

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* 199* 3.33656E+01* 1.78812E+03  1.038 % * 1.51391E+03  0.072 % *  7.78043E+05   16.6178  4.66595E-01  0.3037 *
* 204* 3.11279E+01* 1.78894E+03  1.039 % * 1.82624E+03  0.105 % *  1.51820E+06   26.1669  9.39638E-01  0.7940 *
* 209* 3.18900E+01* 1.66261E+03  0.937 % * 2.35859E+03  0.175 % *  1.90631E+06    9.2344  1.32234E+00  0.8689 *
* 214* 3.26553E+01* 1.59743E+03  0.819 % * 1.07483E+03  0.036 % *  6.04200E+05  -23.3876  4.59750E-01  0.4611 *
* 219* 3.34167E+01* 1.60981E+03  0.841 % * 1.51980E+03  0.073 % *  1.08547E+06  -30.0209  8.03153E-01  0.7237 *
* 224* 3.41797E+01* 1.68193E+03  0.918 % * 1.71817E+03  0.093 % *  1.26443E+06   16.9159  8.37058E-01  0.7039 *
* 229* 3.49426E+01* 1.70919E+03  0.948 % * 2.04754E+03  0.132 % *  1.51264E+06  -17.5620  9.92856E-01  0.6869 *
* 234* 3.57055E+01* 1.60311E+03  0.841 % * 1.35489E+03  0.058 % *  9.45152E+05   -7.5633  5.99949E-01  0.6910 *
* 239* 3.64595E+01* 1.43315E+03  0.714 % * 1.40593E+03  0.062 % *  8.54062E+05   -3.7336  7.44471E-01  0.6169 *
* 244* 3.72314E+01* 1.33708E+03  0.625 % * 1.33810E+03  0.056 % *  8.59855E+05    8.7858  8.56941E-01  0.7891 *
* 249* 3.79944E+01* 1.33718E+03  0.580 % * 2.12013E+03  0.141 % *  1.34962E+06    7.6057  1.44732E+00  0.8333 *
* 254* 3.87573E+01* 1.23381E+03  0.494 % * 1.56436E+03  0.077 % *  8.13687E+05   -6.0979  1.02492E+00  0.6534 *
* 259* 3.95203E+01* 1.10302E+03  0.395 % * 4.84489E+02  0.007 % *  1.79202E+05   16.0168  2.82427E-01  0.4134 *
* 264* 4.02832E+01* 9.45436E+02  0.290 % * 1.70642E+03  0.091 % *  7.95257E+05   -8.4747  1.70598E+00  0.8934 *
* 269* 4.10461E+01* 8.73757E+02  0.248 % * 6.99361E+02  0.015 % *  2.00373E+05   -4.2641  5.03254E-01  0.3953 *
* 274* 4.18091E+01* 8.29077E+02  0.223 % * 9.24469E+02  0.027 % *  3.18087E+05   12.6295  8.87333E-01  0.6333 *
* 279* 4.25720E+01* 7.45212E+02  0.181 % * 8.96777E+02  0.025 % *  2.93831E+05  -37.3907  1.01182E+00  0.7249 *
* 284* 4.33350E+01* 6.60466E+02  0.142 % * 1.35045E+03  0.057 % *  3.69384E+05  -18.4777  1.62370E+00  0.6306 *
* 289* 4.40979E+01* 5.52770E+02  0.099 % * 1.04611E+03  0.034 % *  2.53077E+05  -32.8137  1.58816E+00  0.7042 *
* 294* 4.48608E+01* 4.57727E+02  0.068 % * 6.97738E+02  0.015 % *  1.12489E+05  329.9843  1.02950E+00  0.4561 *
* 299* 4.56238E+01* 4.16167E+02  0.056 % * 8.05189E+02  0.020 % *  4.33785E+04  -65.0398  4.80252E-01  0.0516 *
* 304* 4.63867E+01* 3.93002E+02  0.052 % * 7.92641E+02  0.020 % *  8.83543E+04  -41.1840  1.06416E+00  0.2870 *
* 309* 4.71497E+01* 3.68319E+02  0.044 % * 7.41365E+02  0.017 % *  6.59849E+04  -27.5429  9.32669E-01  0.2147 *
* 314* 4.79126E+01* 2.56915E+02  0.021 % * 4.06284E+02  0.005 % *  3.35413E+04   65.7733  9.74393E-01  0.3797 *
* 319* 4.86755E+01* 9.88265E+01  0.003 % * 7.77967E+02  0.019 % *  5.57878E+03  301.2152  1.09527E+00  0.0194 *
* 324* 4.94385E+01* 2.30678E+01  0.000 % * 4.89044E+02  0.008 % *  7.92540E+02  -23.5646  2.35623E+00  0.0182 *
* 329* 5.02014E+01* 1.50577E+01  0.000 % * 7.51245E+02  0.018 % *  2.49505E+03  -32.3292  2.11090E+01  0.1790 *
* 334* 5.09644E+01* 1.27237E+01  0.000 % * 5.32927E+02  0.009 % *  4.63465E+02  332.0229  5.48934E+00  0.0172 *
* 339* 5.17273E+01* 1.14166E+01  0.000 % * 3.79023E+02  0.005 % *  8.89261E+01   48.6771  1.30823E+00  0.0016 *
* 344* 5.24902E+01* 2.56041E+01  0.000 % * 4.30032E+02  0.006 % *  2.05248E+03   42.4262  6.00331E+00  0.1278 *
* 349* 5.32532E+01* 1.86733E+01  0.000 % * 4.63523E+02  0.007 % *  1.32632E+03  -16.0324  7.29351E+00  0.0863 *
* 354* 5.40161E+01* 7.33727E+00  0.000 % * 6.60982E+02  0.014 % *  2.11495E+02  -82.2697  7.53287E+00  0.0070 *
* 359* 5.47790E+01* 1.46579E+01  0.000 % * 5.18575E+02  0.008 % *  2.14545E+03  158.4151  1.91472E+01  0.2929 *
* 364* 5.55420E+01* 7.55002E+00  0.000 % * 2.78985E+02  0.002 % *  7.27687E+02 -148.7003  2.44781E+01  0.4388 *
* 369* 5.63049E+01* 4.56999E+00  0.000 % * 1.84191E+02  0.001 % *  9.64223E+01 -185.8533  8.85273E+00  0.0482 *
* 374* 5.70679E+01* 5.70984E+00  0.000 % * 3.17163E+02  0.003 % *  3.56219E+02 -130.3188  2.09507E+01  0.1423 *
* 379* 5.78308E+01* 4.75962E+00  0.000 % * 1.40139E+02  0.001 % *  2.36867E+02  -35.2151  2.00489E+01  0.4637 *
* 384* 5.85937E+01* 4.44525E+00  0.000 % * 1.31684E+02  0.001 % *  1.92610E+02    4.1323  1.86818E+01  0.3979 *
* 389* 5.93567E+01* 2.76888E+01  0.000 % * 1.30689E+02  0.001 % *  1.44352E+03  -10.3036  3.51030E+00  0.5851 *
* 394* 6.01196E+01* 8.29479E+01  0.002 % * 3.19505E+02  0.003 % *  1.29833E+04   -3.9273  3.51829E+00  0.8824 *
* 399* 6.08825E+01* 4.22472E+00  0.000 % * 1.97202E+02  0.001 % *  3.47603E+02   97.7211  3.73444E+01  0.6401 *
* 404* 6.16455E+01* 5.15929E+00  0.000 % * 1.52940E+02  0.001 % *  2.40924E+02  -41.4341  1.73552E+01  0.3428 *
* 409* 6.24084E+01* 4.88561E+00  0.000 % * 2.14873E+02  0.001 % *  4.62777E+02   -4.6108  3.71761E+01  0.7145 *
* 414* 6.31714E+01* 9.75515E+00  0.000 % * 2.21430E+02  0.002 % *  5.00169E+02 -313.0726  1.00781E+01  0.1971 *
* 419* 6.39343E+01* 3.60225E+00  0.000 % * 1.58565E+02  0.001 % *  1.62977E+02   32.3742  2.40829E+01  0.2990 *
* 424* 6.46973E+01* 4.75549E+00  0.000 % * 2.55171E+02  0.002 % *  5.18147E+02  -33.4104  4.37305E+01  0.6133 *
* 429* 6.54602E+01* 2.97280E+00  0.000 % * 1.55388E+02  0.001 % *  8.95987E+01  132.1732  1.94401E+01  0.1383 *
* 434* 6.62231E+01* 6.01324E+00  0.000 % * 1.62751E+02  0.001 % *  4.22199E+02   12.4247  2.23888E+01  0.6843 *
* 439* 6.69861E+01* 3.17530E+00  0.000 % * 1.48372E+02  0.001 % *  2.50078E+02   79.7310  1.79034E+01  0.3900 *
* 444* 6.77490E+01* 5.63034E+00  0.000 % * 1.39579E+02  0.001 % *  3.79925E+02  327.9415  1.55714E+01  0.4741 *
******************* 0.00000E+00  0.000 % * 0.00000E+00  0.000 % ******************************************
**********************************************************************************************************
****************************** 0.000 % ************ 0.000 % ***********************************************
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SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS, USER NAME..................GLM
SET - .SVJ COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS.............. 1004 RUNTITLE FFID=621 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE----------- 9009 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 56 CHAN = 49

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-PIF1	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-PIF2	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	4.62372E+01	0.002 %	8.91873E+02	13.6593	1.21314E+00	0.9704
9	1.37329E+00	5.27024E+01	0.001 %	6.00057E+01	0.003 %	1.92937E+03	3.7873	9.40973E-01	0.9668
14	2.13623E+00	1.05583E+02	0.004 %	8.79679E+01	0.006 %	4.73463E+03	3.6443	3.14374E-01	0.9554
19	2.89917E+00	1.15154E+02	0.004 %	7.91308E+01	0.005 %	4.60453E+03	-5.3070	6.55704E-01	0.9387
24	3.66211E+00	1.50009E+02	0.007 %	9.77722E+01	0.008 %	7.56417E+03	-0.2860	6.44546E-01	0.9779
29	4.42505E+00	2.35815E+02	0.018 %	1.79735E+02	0.027 %	2.20592E+04	2.8015	7.54227E-01	0.9875
34	5.18799E+00	2.02181E+02	0.013 %	1.29620E+02	0.014 %	1.35907E+04	7.5354	6.37518E-01	0.9887
39	5.95093E+00	3.03295E+02	0.030 %	2.22331E+02	0.041 %	3.50270E+04	2.5431	7.30132E-01	0.9921
44	6.71387E+00	3.19848E+02	0.033 %	2.22228E+02	0.041 %	3.70140E+04	2.9059	6.93759E-01	0.9970
49	7.47681E+00	3.42754E+02	0.038 %	2.31078E+02	0.044 %	4.11963E+04	0.0346	6.72391E-01	0.9947
54	8.23975E+00	3.85564E+02	0.048 %	2.59150E+02	0.060 %	5.40872E+04	4.9242	6.97640E-01	0.9983
59	9.00269E+00	4.20532E+02	0.057 %	2.85498E+02	0.058 %	5.26295E+04	3.8323	6.78549E-01	0.9997
64	9.76562E+00	5.00734E+02	0.081 %	3.52725E+02	0.103 %	9.20860E+04	4.4651	7.04222E-01	0.9994
69	1.05286E+01	5.14967E+02	0.086 %	3.56015E+02	0.105 %	9.55775E+04	4.3029	6.91076E-01	0.9993
74	1.12913E+01	5.76713E+02	0.108 %	3.98430E+02	0.132 %	1.19743E+05	3.9801	6.90338E-01	0.9985
79	1.20544E+01	5.65784E+02	0.104 %	3.91543E+02	0.127 %	1.15513E+05	4.4454	6.91955E-01	0.9998
84	1.28174E+01	5.19890E+02	0.088 %	3.52333E+02	0.103 %	9.55169E+04	6.8103	5.77647E-01	0.9998
89	1.35803E+01	5.09324E+02	0.084 %	3.49247E+02	0.101 %	9.27613E+04	5.1475	5.35564E-01	0.9999
94	1.43433E+01	5.18362E+02	0.087 %	3.46236E+02	0.099 %	9.35569E+04	7.0618	6.57636E-01	0.9991
99	1.51062E+01	5.39494E+02	0.094 %	3.53832E+02	0.110 %	1.02355E+05	6.4599	6.74325E-01	0.9998
104	1.58691E+01	6.04676E+02	0.119 %	4.00627E+02	0.133 %	1.26330E+05	7.1317	6.62509E-01	0.9993
109	1.66321E+01	6.52302E+02	0.138 %	4.33697E+02	0.156 %	1.47531E+05	6.7153	6.54838E-01	0.9999
114	1.73950E+01	6.31368E+02	0.130 %	4.19607E+02	0.146 %	1.38249E+05	7.4380	6.63956E-01	0.9996
119	1.81580E+01	5.91497E+02	0.114 %	3.84332E+02	0.122 %	1.18548E+05	8.0978	6.49728E-01	0.9993
124	1.89209E+01	6.14776E+02	0.123 %	3.99398E+02	0.132 %	1.28023E+05	7.5756	6.49539E-01	0.9996
129	1.96838E+01	6.59358E+02	0.141 %	4.29916E+02	0.153 %	1.47810E+05	8.3596	6.51918E-01	0.9997
134	2.04468E+01	7.28163E+02	0.172 %	4.70990E+02	0.184 %	1.78812E+05	8.2172	6.46648E-01	0.9995
139	2.12097E+01	7.99753E+02	0.203 %	5.03229E+02	0.210 %	2.07500E+05	8.1366	6.36308E-01	0.9997
144	2.19727E+01	8.73988E+02	0.251 %	5.52249E+02	0.253 %	2.53091E+05	7.8473	6.28118E-01	0.9995
149	2.27356E+01	9.57304E+02	0.298 %	5.97653E+02	0.296 %	2.98500E+05	7.1829	6.23908E-01	0.9996
154	2.34985E+01	1.05793E+03	0.370 %	6.62275E+02	0.364 %	3.68840E+05	6.7499	6.20129E-01	0.9999
159	2.42615E+01	1.16304E+03	0.439 %	7.15310E+02	0.424 %	4.33852E+05	6.4763	6.15007E-01	0.9999
164	2.50244E+01	1.14276E+03	0.424 %	6.95368E+02	0.401 %	4.14411E+05	5.8237	6.08489E-01	1.0000
169	2.57874E+01	1.24775E+03	0.505 %	7.50108E+02	0.479 %	4.94512E+05	5.3682	6.01166E-01	1.0000
174	2.65503E+01	1.37538E+03	0.614 %	8.44365E+02	0.592 %	5.06000E+05	4.1474	6.14268E-01	1.0000
179	2.73132E+01	1.48355E+03	0.719 %	9.15577E+02	0.695 %	7.10827E+05	3.6957	6.15050E-01	1.0000
184	2.80762E+01	1.54955E+03	0.780 %	9.55595E+02	0.757 %	7.72214E+05	2.9232	6.16675E-01	0.9999
189	2.88391E+01	1.65078E+03	0.885 %	1.02383E+03	0.869 %	8.81419E+05	2.4657	6.20201E-01	1.0000
194	2.96020E+01	1.72928E+03	0.971 %	1.08600E+03	0.978 %	9.79340E+05	2.3790	6.27963E-01	0.9999

199	3.03658E+01	1.79312E+03	1.053 %	1.12375E+03	1.047 %	1.04791E+06	2.0776	6.28435E-01	0.9993
204	3.11279E+01	1.78894E+03	1.059 %	1.12339E+03	1.045 %	1.04807E+06	2.7734	6.27957E-01	1.0000
209	3.18909E+01	1.66261E+03	0.897 %	1.03292E+03	0.884 %	8.95625E+05	2.9621	6.21264E-01	1.0000
214	3.26538E+01	1.58743E+03	0.819 %	9.75386E+02	0.789 %	8.07490E+05	2.8988	6.14438E-01	1.0000
219	3.34167E+01	1.60981E+03	0.841 %	9.80729E+02	0.797 %	8.23355E+05	2.1730	6.09213E-01	1.0000
224	3.41797E+01	1.68193E+03	0.918 %	1.02477E+03	0.871 %	8.98873E+05	1.2241	6.09277E-01	1.0000
229	3.49426E+01	1.70919E+03	0.948 %	1.04412E+03	0.904 %	9.30693E+05	0.5502	6.10880E-01	1.0000
234	3.57056E+01	1.69111E+03	0.941 %	9.81037E+02	0.798 %	8.23273E+05	0.1259	6.09685E-01	1.0000
239	3.64685E+01	1.48315E+03	0.714 %	9.01292E+02	0.673 %	6.97127E+05	-0.1910	6.07675E-01	1.0000
244	3.72314E+01	1.38708E+03	0.625 %	8.43015E+02	0.589 %	6.09823E+05	-0.5649	6.07758E-01	1.0000
249	3.79944E+01	1.33718E+03	0.580 %	8.10305E+02	0.544 %	5.65072E+05	-1.0947	6.05978E-01	1.0000
254	3.87573E+01	1.23381E+03	0.494 %	7.44949E+02	0.460 %	4.79335E+05	-1.3910	6.03774E-01	1.0000
259	3.95203E+01	1.10302E+03	0.395 %	6.63865E+02	0.365 %	3.81881E+05	-1.4929	6.01856E-01	1.0000
264	4.02832E+01	9.45436E+02	0.290 %	5.59108E+02	0.268 %	2.80502E+05	-1.6442	6.01945E-01	1.0000
269	4.10461E+01	8.73757E+02	0.248 %	5.23115E+02	0.227 %	2.38365E+05	-1.7430	5.98676E-01	0.9999
274	4.18091E+01	8.29077E+02	0.223 %	4.96163E+02	0.204 %	2.14528E+05	-1.8058	5.98445E-01	1.0000
279	4.25720E+01	7.46212E+02	0.181 %	4.41340E+02	0.161 %	1.71751E+05	-2.0000	5.91431E-01	1.0000
284	4.33350E+01	6.60466E+02	0.142 %	3.89486E+02	0.126 %	1.34147E+05	-2.4888	5.89672E-01	0.9999
289	4.40979E+01	5.52770E+02	0.099 %	3.23439E+02	0.087 %	9.32343E+04	-2.6126	5.85086E-01	0.9999
294	4.48608E+01	4.57727E+02	0.068 %	2.54211E+02	0.058 %	5.30672E+04	-2.9495	5.77191E-01	0.9999
299	4.56238E+01	4.15167E+02	0.056 %	2.42713E+02	0.049 %	5.26571E+04	-4.1107	5.82976E-01	0.9992
304	4.63867E+01	3.99002E+02	0.052 %	2.32718E+02	0.045 %	4.84197E+04	-3.8671	5.83177E-01	0.9998
309	4.71497E+01	3.68319E+02	0.044 %	2.18090E+02	0.039 %	4.18872E+04	-4.6119	5.92058E-01	0.9998
314	4.79126E+01	2.56915E+02	0.021 %	1.53577E+02	0.020 %	2.05723E+04	-5.0144	5.97634E-01	0.9995
319	4.86755E+01	9.88265E+01	0.003 %	6.11240E+01	0.003 %	3.14883E+03	-5.9093	6.18207E-01	0.9991
324	4.94385E+01	2.30678E+01	0.000 %	1.45378E+01	0.000 %	1.72283E+02	-3.0856	6.20818E-01	0.9704
329	5.02014E+01	1.50577E+01	0.000 %	1.07055E+01	0.000 %	8.16363E+01	-11.5173	6.90397E-01	0.9430
334	5.09644E+01	1.27237E+01	0.000 %	1.12473E+01	0.000 %	5.85593E+01	-11.5101	8.12150E-01	0.8441
339	5.17273E+01	1.14166E+01	0.000 %	7.85543E+00	0.000 %	4.59173E+01	-6.4818	6.75511E-01	0.9638
344	5.24902E+01	2.56041E+01	0.000 %	2.75071E+01	0.001 %	3.61799E+02	-18.8146	1.05823E+00	0.9703
349	5.32532E+01	1.86733E+01	0.000 %	2.23790E+01	0.000 %	2.06735E+02	5.2528	1.13585E+00	0.8998
354	5.40161E+01	7.33727E+00	0.000 %	4.60547E+00	0.000 %	1.62450E+01	-15.5835	5.78502E-01	0.8497
359	5.47790E+01	1.46579E+01	0.000 %	1.45262E+01	0.000 %	1.07810E+02	-18.6734	9.62153E-01	0.9426
364	5.55420E+01	7.55002E+00	0.000 %	6.36005E+00	0.000 %	2.31725E+01	-11.5158	7.79482E-01	0.8562
369	5.63049E+01	4.56999E+00	0.000 %	4.44416E+00	0.000 %	9.48397E+00	5.1774	8.70743E-01	0.8017
374	5.70679E+01	5.70984E+00	0.000 %	5.40812E+00	0.000 %	1.50150E+01	-13.7085	8.83092E-01	0.8693
379	5.78308E+01	4.75962E+00	0.000 %	4.71227E+00	0.000 %	1.13850E+01	2.2669	9.53650E-01	0.9474
384	5.85937E+01	4.44625E+00	0.000 %	4.69918E+00	0.000 %	1.04542E+01	-5.2217	1.01496E+00	0.9222
389	5.93567E+01	2.76888E+01	0.000 %	3.98393E+01	0.001 %	5.74439E+02	-14.9980	1.43570E+00	0.9970
394	6.01196E+01	8.29479E+01	0.002 %	1.20228E+02	0.012 %	5.19975E+03	-14.9986	1.44911E+00	0.9995
399	6.08826E+01	4.22472E+00	0.000 %	4.11825E+00	0.000 %	9.41599E+00	3.2877	9.04255E-01	0.8605
404	6.16455E+01	5.15929E+00	0.000 %	4.35066E+00	0.000 %	1.11767E+01	-13.0603	8.05126E-01	0.9116
409	6.24084E+01	4.88561E+00	0.000 %	4.46581E+00	0.000 %	1.06830E+01	-23.8571	8.58197E-01	0.8815
414	6.31714E+01	9.75515E+00	0.000 %	1.29099E+01	0.000 %	5.99774E+01	-28.6346	1.20851E+00	0.8339
419	6.39343E+01	3.60225E+00	0.000 %	2.81076E+00	0.000 %	4.81060E+00	12.8851	7.10857E-01	0.8300
424	6.46973E+01	4.76549E+00	0.000 %	5.12215E+00	0.000 %	1.17132E+01	-5.9311	9.38572E-01	0.8463
429	6.54602E+01	2.97280E+00	0.000 %	2.40940E+00	0.000 %	2.62197E+00	25.3192	5.58886E-01	0.4927
434	6.62231E+01	6.01324E+00	0.000 %	4.81440E+00	0.000 %	1.46570E+01	-14.2338	7.77243E-01	0.9424
439	6.69861E+01	5.17530E+00	0.000 %	3.77836E+00	0.000 %	9.38451E+00	1.2983	6.71847E-01	0.8468
444	6.77490E+01	6.63034E+00	0.000 %	4.96085E+00	0.000 %	1.67604E+01	-13.0429	7.31044E-01	0.9547
******	******	0.00000E+00	0.000 %	0.00000E+00	0.000 %	******	******	******	******
******	******	******	0.000 %	******	0.000 %	******	******	******	******

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*******************************************************************************************
SET TITLE......................  VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS4 USER NAME...................GLM
SET - .SVS COMMENTS..............           INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNG. COMMENTS............. 1004   RUNTITLE    FFID=521  30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000   ENDANALYSIS  ;    VERTICAL PILE DISP AND FORCE DATA
SHOT =      2020  SEQNO =          56  CHAN =        44
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I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-P1F0	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-P1F2	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	4.62372E+01	0.002 %	8.91879E+02	13.6593	1.21314E+00	0.9704
9	1.37329E+00	6.27024E+01	0.001 %	6.00057E+01	0.003 %	1.92937E+03	3.7873	9.40973E-01	0.9668
14	2.13623E+00	1.05583E+02	0.004 %	8.79679E+01	0.006 %	4.73463E+03	3.6443	8.14374E-01	0.9554
19	2.89917E+00	1.15164E+02	0.004 %	7.91308E+01	0.005 %	4.60453E+03	-5.3070	6.55704E-01	0.9387
24	3.66211E+00	1.50009E+02	0.007 %	9.77722E+01	0.008 %	7.56417E+03	-0.2860	6.44546E-01	0.9773
29	4.42505E+00	2.36815E+02	0.018 %	1.79735E+02	0.027 %	2.20592E+04	2.8015	7.54227E-01	0.9875
34	5.18799E+00	2.02181E+02	0.013 %	1.29628E+02	0.014 %	1.35907E+04	7.5354	6.37518E-01	0.9887
39	5.95093E+00	3.03295E+02	0.030 %	2.22331E+02	0.041 %	3.50270E+04	2.5431	7.30132E-01	0.9921
44	6.71387E+00	3.19848E+02	0.033 %	2.22228E+02	0.041 %	3.70140E+04	2.9039	6.93759E-01	0.9970
49	7.47681E+00	3.42754E+02	0.038 %	2.31078E+02	0.044 %	4.11963E+04	0.0346	6.72391E-01	0.9947
54	8.23975E+00	3.85564E+02	0.048 %	2.59150E+02	0.060 %	5.40872E+04	4.9242	6.97640E-01	0.9988
59	9.00269E+00	4.20592E+02	0.057 %	2.85493E+02	0.068 %	5.26295E+04	3.8323	6.78549E-01	0.9997
64	9.76562E+00	5.00734E+02	0.081 %	3.52725E+02	0.103 %	9.20860E+04	4.4651	7.04222E-01	0.9994
69	1.05286E+01	5.14967E+02	0.086 %	3.56015E+02	0.105 %	9.55775E+04	4.3029	6.91076E-01	0.9993
74	1.12915E+01	5.76713E+02	0.108 %	3.98430E+02	0.132 %	1.19743E+05	3.9801	6.90338E-01	0.9985
79	1.20544E+01	5.65784E+02	0.104 %	3.91543E+02	0.127 %	1.15518E+05	4.4454	6.91955E-01	0.9998
84	1.28174E+01	5.19880E+02	0.088 %	3.52333E+02	0.103 %	9.55169E+04	6.8103	6.77647E-01	0.9998
89	1.35803E+01	5.09324E+02	0.084 %	3.49247E+02	0.101 %	9.27619E+04	5.1475	6.85564E-01	0.9999
94	1.43433E+01	5.18362E+02	0.087 %	3.46235E+02	0.099 %	9.35563E+04	7.0618	6.67636E-01	0.9991
99	1.51062E+01	5.39494E+02	0.094 %	3.63832E+02	0.110 %	1.02356E+05	6.4599	6.74325E-01	0.9998
104	1.58691E+01	6.04676E+02	0.119 %	4.00627E+02	0.133 %	1.26330E+05	7.1317	6.62509E-01	0.9999
109	1.66321E+01	6.52302E+02	0.138 %	4.33697E+02	0.156 %	1.47531E+05	5.7153	6.64838E-01	0.9999
114	1.73950E+01	6.31868E+02	0.130 %	4.19607E+02	0.146 %	1.38249E+05	7.4380	6.63956E-01	0.9995
119	1.81580E+01	5.91487E+02	0.114 %	3.84332E+02	0.122 %	1.18543E+05	8.0978	6.49728E-01	0.9999
124	1.89209E+01	6.14776E+02	0.123 %	3.99398E+02	0.132 %	1.28023E+05	7.5756	6.49539E-01	0.9996
129	1.96838E+01	6.59358E+02	0.141 %	4.29916E+02	0.153 %	1.47810E+05	8.3596	6.51918E-01	0.9997
134	2.04468E+01	7.28163E+02	0.172 %	4.70990E+02	0.184 %	1.78812E+05	8.2172	6.46648E-01	0.9995
139	2.12097E+01	7.90753E+02	0.203 %	5.03229E+02	0.210 %	2.07500E+05	8.1336	6.36398E-01	0.9997
144	2.19727E+01	8.78389E+02	0.251 %	5.52249E+02	0.253 %	2.53091E+05	7.8473	6.28711E-01	0.9995
149	2.27356E+01	9.57604E+02	0.298 %	5.97653E+02	0.296 %	2.98500E+05	7.1829	6.23908E-01	0.9993
154	2.34985E+01	1.06793E+03	0.370 %	6.62275E+02	0.364 %	3.68840E+05	6.7499	6.20129E-01	0.9999
159	2.42615E+01	1.16304E+03	0.439 %	7.15310E+02	0.424 %	4.33852E+05	6.4763	6.15007E-01	0.9999
164	2.50244E+01	1.14276E+03	0.424 %	6.95368E+02	0.401 %	4.14411E+05	5.8237	6.08489E-01	1.0000
169	2.57874E+01	1.24775E+03	0.505 %	7.50103E+02	0.479 %	4.94612E+05	5.3682	6.01165E-01	1.0000
174	2.65503E+01	1.37338E+03	0.614 %	8.44866E+02	0.592 %	5.06000E+05	4.1474	6.14268E-01	1.0000
179	2.73132E+01	1.49855E+03	0.719 %	9.15597E+02	0.695 %	7.10827E+05	3.5957	6.15050E-01	1.0000
184	2.80762E+01	1.54955E+03	0.780 %	9.55595E+02	0.757 %	7.72214E+05	2.9232	6.15675E-01	0.9999
189	2.88391E+01	1.65078E+03	0.885 %	1.02383E+03	0.869 %	8.81419E+05	2.4637	6.20201E-01	1.0000
194	2.96020E+01	1.72928E+03	0.971 %	1.08600E+03	0.978 %	9.79340E+05	2.3790	6.27963E-01	0.9999

199	3.13658E+01	1.78812E+03	1.038 %	1.12375E+03	1.047 %	1.04791E+06	2.0776	6.28435E-01	0.9999
204	3.11279E+01	1.74494E+03	1.039 %	1.12330E+03	1.046 %	1.04807E+06	2.7734	6.27957E-01	1.0000
209	3.18909E+01	1.66261E+03	0.897 %	1.03292E+03	0.884 %	8.95625E+05	2.9621	6.21264E-01	1.0000
214	3.26538E+01	1.58743E+03	0.818 %	9.75386E+02	0.789 %	8.07490E+05	2.8988	6.14438E-01	1.0000
219	3.34167E+01	1.60981E+03	0.841 %	9.80729E+02	0.797 %	8.23353E+05	2.1750	6.09213E-01	1.0000
224	3.41797E+01	1.68193E+03	0.918 %	1.02477E+03	0.871 %	8.98878E+05	1.2241	6.09277E-01	1.0000
229	3.49426E+01	1.70919E+03	0.948 %	1.04412E+03	0.904 %	9.30693E+05	0.5502	6.10880E-01	1.0000
234	3.57055E+01	1.60711E+03	0.841 %	9.81057E+02	0.798 %	8.23278E+05	0.1259	6.09685E-01	1.0000
239	3.64685E+01	1.48315E+03	0.714 %	9.01292E+02	0.673 %	6.97129E+05	-0.1910	6.07676E-01	1.0000
244	3.72314E+01	1.38708E+03	0.625 %	8.43015E+02	0.589 %	6.09825E+05	-0.5649	6.07759E-01	1.0000
249	3.79944E+01	1.33718E+03	0.580 %	8.10305E+02	0.544 %	5.65072E+05	-1.0947	6.05978E-01	1.0000
254	3.87573E+01	1.23381E+03	0.494 %	7.44949E+02	0.460 %	4.79335E+05	-1.3910	6.03774E-01	1.0000
259	3.95203E+01	1.10302E+03	0.395 %	6.53865E+02	0.365 %	3.81881E+05	-1.4929	6.01856E-01	1.0000
264	4.02832E+01	9.45436E+02	0.290 %	5.59108E+02	0.268 %	2.80602E+05	-1.6442	6.01945E-01	1.0000
269	4.10461E+01	8.73757E+02	0.248 %	5.23115E+02	0.227 %	2.38365E+05	-1.7430	5.98676E-01	0.9997
274	4.18091E+01	8.29377E+02	0.223 %	4.96163E+02	0.204 %	2.14523E+05	-1.8058	5.98445E-01	1.0000
279	4.25720E+01	7.46212E+02	0.181 %	4.41340E+02	0.161 %	1.71751E+05	-2.0000	5.91431E-01	1.0000
284	4.33350E+01	6.60466E+02	0.142 %	3.89486E+02	0.126 %	1.34147E+05	-2.4888	5.89672E-01	0.9999
289	4.40979E+01	5.52770E+02	0.099 %	3.23439E+02	0.087 %	9.32348E+04	-2.6126	5.85086E-01	0.9999
294	4.48608E+01	4.57727E+02	0.069 %	2.64211E+02	0.058 %	6.30672E+04	-2.9495	5.77191E-01	0.9999
299	4.56238E+01	4.16167E+02	0.056 %	2.42713E+02	0.049 %	5.26571E+04	-4.1107	5.82976E-01	0.9992
304	4.63867E+01	3.99002E+02	0.052 %	2.32718E+02	0.045 %	4.84197E+04	-3.8671	5.83177E-01	0.9998
309	4.71497E+01	3.68319E+02	0.044 %	2.18090E+02	0.039 %	4.18872E+04	-4.6119	5.92058E-01	0.9998
314	4.79126E+01	2.56915E+02	0.021 %	1.53577E+02	0.020 %	2.05723E+04	-5.0144	5.97534E-01	0.9995
319	4.86755E+01	9.88265E+01	0.003 %	6.11240E+01	0.003 %	3.14885E+03	-5.9093	6.18207E-01	0.9991
324	4.94385E+01	2.30678E+01	0.000 %	1.45378E+01	0.000 %	1.72285E+02	-3.0356	6.20818E-01	0.9704
329	5.02014E+01	1.50577E+01	0.000 %	1.07056E+01	0.000 %	8.16368E+01	-11.5173	6.90397E-01	0.9430
334	5.09644E+01	1.27237E+01	0.000 %	1.12473E+01	0.000 %	5.85698E+01	-11.5101	8.12159E-01	0.8441
339	5.17273E+01	1.14166E+01	0.000 %	7.85543E+00	0.000 %	4.59173E+01	-6.4818	6.75511E-01	0.9638
344	5.24902E+01	2.56041E+01	0.000 %	2.75071E+01	0.001 %	3.61798E+02	-18.8146	1.05823E+00	0.9703
349	5.32532E+01	1.86733E+01	0.000 %	2.23790E+01	0.000 %	2.06735E+02	5.2528	1.13685E+00	0.8998
354	5.40161E+01	7.33727E+00	0.000 %	4.50547E+00	0.000 %	1.62450E+01	-15.5835	5.78602E-01	0.8497
359	5.47790E+01	1.46579E+01	0.000 %	1.45262E+01	0.000 %	1.07810E+02	-18.6754	9.62153E-01	0.9425
364	5.55420E+01	7.55002E+00	0.000 %	6.36005E+00	0.000 %	2.31725E+01	-11.5158	7.79482E-01	0.8562
369	5.63049E+01	4.56999E+00	0.000 %	4.44416E+00	0.000 %	9.48397E+00	5.1774	8.70743E-01	0.8017
374	5.70679E+01	5.70984E+00	0.000 %	5.40812E+00	0.000 %	1.50150E+01	-13.7085	8.83092E-01	0.8693
379	5.78308E+01	4.75962E+00	0.000 %	4.71227E+00	0.000 %	1.13850E+01	2.2669	9.53650E-01	0.9474
384	5.85937E+01	4.44525E+00	0.000 %	4.69918E+00	0.000 %	1.04642E+01	-5.2217	1.01495E+00	0.9222
389	5.93567E+01	2.75888E+01	0.000 %	3.98393E+01	0.001 %	5.74437E+02	-14.9980	1.43670E+00	0.9970
394	6.01196E+01	8.29479E+01	0.002 %	1.20223E+02	0.012 %	5.19973E+03	-14.9986	1.44911E+00	0.9995
399	6.08826E+01	4.22472E+00	0.000 %	4.11825E+00	0.000 %	8.41693E+00	3.2877	9.04255E-01	0.8605
404	6.16455E+01	5.15929E+00	0.000 %	4.35065E+00	0.000 %	1.11767E+01	-13.0603	8.05126E-01	0.9116
409	6.24084E+01	4.88561E+00	0.000 %	4.46581E+00	0.000 %	1.06830E+01	-23.8571	8.58197E-01	0.8815
414	6.31714E+01	9.75515E+00	0.000 %	1.29098E+01	0.003 %	5.99774E+01	-28.6346	1.20851E+00	0.8339
419	6.39343E+01	3.60225E+00	0.000 %	2.81076E+00	0.000 %	4.81060E+00	12.8851	7.10857E-01	0.8300
424	6.46973E+01	4.76649E+00	0.000 %	5.12215E+00	0.000 %	1.17132E+01	-5.9311	9.88572E-01	0.8463
429	6.54602E+01	2.97280E+00	0.000 %	2.40940E+00	0.000 %	2.62197E+00	25.3192	5.58886E-01	0.4927
434	6.62231E+01	6.01324E+00	0.000 %	4.81440E+00	0.000 %	1.46570E+01	-14.2538	7.77243E-01	0.9424
439	6.69861E+01	5.17530E+00	0.000 %	3.77835E+00	0.000 %	9.38451E+00	1.2983	6.71847E-01	0.8468
444	6.77490E+01	5.63034E+00	0.000 %	4.96085E+00	0.000 %	1.67604E+01	-13.9429	7.31044E-01	0.9547
******	******	0.00000E+00	0.000 %	0.00000E+00	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******
******	******	******	0.000 %	******	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME.................GLM
SET - .SVS COMMENTS............ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE FFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 58 CHAN = 45

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-P1F0	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-P1F4	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	1.34928E+02	0.046 %	1.70003E+03	11.4324	2.31245E+00	0.4141
9	1.37329E+00	6.27024E+01	0.001 %	1.16874E+02	0.034 %	2.92215E+03	42.9673	1.42516E+00	0.5846
14	2.13623E+00	1.05583E+02	0.004 %	1.36800E+02	0.047 %	5.95645E+03	15.0954	1.19654E+00	0.8528
19	2.89917E+00	1.15164E+02	0.004 %	8.15127E+01	0.017 %	1.00509E+03	-10.7657	1.45457E-01	0.0422
24	3.66211E+00	1.50009E+02	0.007 %	6.56301E+01	0.011 %	2.14220E+03	-5.5614	1.92537E-01	0.1689
29	4.42505E+00	2.36315E+02	0.018 %	1.32426E+02	0.044 %	1.40250E+04	20.4985	4.79529E-01	0.7354
34	5.18799E+00	2.02181E+02	0.013 %	9.56215E+01	0.023 %	8.95820E+03	18.8262	4.20215E-01	0.7894
39	5.95093E+00	3.03295E+02	0.030 %	1.71714E+02	0.074 %	2.53187E+04	3.2345	5.27764E-01	0.8690
44	6.71387E+00	3.19848E+02	0.033 %	1.57574E+02	0.062 %	2.45913E+04	3.0453	4.60913E-01	0.8742
49	7.47681E+00	3.42754E+02	0.038 %	1.50628E+02	0.057 %	2.39490E+04	-7.6908	3.90888E-01	0.7911
54	8.23975E+00	3.85564E+02	0.048 %	1.37247E+02	0.047 %	2.53149E+04	9.7079	3.26522E-01	0.8414
59	9.00269E+00	4.20692E+02	0.057 %	1.32658E+02	0.044 %	2.77445E+04	-0.0270	3.00594E-01	0.9087
64	9.76562E+00	5.00734E+02	0.081 %	1.96318E+02	0.097 %	5.06534E+04	5.9593	3.87368E-01	0.9762
69	1.05286E+01	5.14967E+02	0.086 %	1.87600E+02	0.088 %	4.93955E+04	11.5021	3.57156E-01	0.9612
74	1.12915E+01	5.76713E+02	0.108 %	1.74663E+02	0.076 %	5.04663E+04	12.0429	2.90949E-01	0.9229
79	1.20544E+01	5.65734E+02	0.114 %	2.26767E+02	0.129 %	6.60723E+04	5.2673	3.95775E-01	0.9751
84	1.28174E+01	5.19880E+02	0.088 %	1.98891E+02	0.099 %	5.05567E+04	15.9889	3.58676E-01	0.8790
89	1.35803E+01	5.09324E+02	0.084 %	1.88449E+02	0.089 %	4.82823E+04	6.6777	3.56890E-01	0.9304
94	1.43433E+01	5.18362E+02	0.087 %	1.59537E+02	0.064 %	3.74201E+04	20.8883	2.67036E-01	0.7528
99	1.51062E+01	5.39494E+02	0.094 %	1.74240E+02	0.076 %	3.79762E+04	27.1217	2.50189E-01	0.6001
104	1.58691E+01	6.04676E+02	0.119 %	3.13253E+02	0.246 %	8.00645E+04	9.9219	4.19879E-01	0.6569
109	1.66321E+01	6.52302E+02	0.138 %	3.81245E+02	0.364 %	7.58050E+04	1.5816	3.41610E-01	0.3415
114	1.73950E+01	6.31868E+02	0.130 %	4.15336E+02	0.432 %	7.37290E+04	10.6133	3.54091E-01	0.2982
119	1.81580E+01	5.91487E+02	0.114 %	3.23871E+02	0.263 %	5.49681E+04	0.9948	3.56073E-01	0.4227
124	1.89209E+01	6.14776E+02	0.123 %	2.92662E+02	0.215 %	5.60129E+04	6.4713	2.84174E-01	0.3563
129	1.96838E+01	6.59358E+02	0.141 %	4.29905E+02	0.463 %	1.03762E+05	15.5374	4.57643E-01	0.4927
134	2.04468E+01	7.28163E+02	0.172 %	5.39455E+02	0.730 %	1.09285E+05	16.4884	3.95216E-01	0.2845
139	2.12097E+01	7.90753E+02	0.203 %	5.60592E+02	0.788 %	1.27895E+05	25.9798	3.92194E-01	0.3060
144	2.19727E+01	8.78988E+02	0.251 %	5.09516E+02	0.651 %	1.32592E+05	43.0035	3.29065E-01	0.3223
149	2.27356E+01	9.57304E+02	0.298 %	3.36582E+02	0.284 %	1.24594E+05	24.5353	2.50420E-01	0.5492
154	2.34985E+01	1.06793E+03	0.370 %	2.80894E+02	0.198 %	1.48321E+05	23.9904	2.49370E-01	0.8989
159	2.42615E+01	1.16304E+03	0.439 %	2.58397E+02	0.167 %	1.52277E+05	0.8063	2.15860E-01	0.9440
164	2.50244E+01	1.14276E+03	0.424 %	3.39980E+02	0.290 %	2.00341E+05	-2.3724	2.94165E-01	0.9777
169	2.57874E+01	1.24775E+03	0.505 %	4.19375E+02	0.441 %	2.70695E+05	9.2405	3.33383E-01	0.9837
174	2.65503E+01	1.37538E+03	0.614 %	4.09131E+02	0.420 %	2.85128E+05	8.8897	2.39018E-01	0.9440
179	2.73132E+01	1.48865E+03	0.719 %	4.88023E+02	0.597 %	3.69333E+05	5.1095	3.19573E-01	0.9502
184	2.80762E+01	1.54955E+03	0.790 %	5.24159E+02	0.689 %	4.20355E+05	6.0381	3.35688E-01	0.9848
189	2.88391E+01	1.65078E+03	0.885 %	6.17091E+02	0.955 %	5.28693E+05	2.3381	3.72012E-01	0.9904
194	2.96020E+01	1.72928E+03	0.971 %	8.45353E+02	1.791 %	7.61463E+05	7.8276	4.88258E-01	0.9976

* 199*	3.03650E+01*	1.78812E+03	1.038 %	* 7.63331E+02	1.461 % *	7.11355E+05	18.7971	4.26601E-01	0.9986 *
* 204*	3.11279E+01*	1.78894E+03	1.039 %	* 7.67829E+02	1.478 % *	7.15324E+05	23.8101	4.28590E-01	0.9971 *
* 209*	3.18909E+01*	1.66261E+03	0.897 %	* 7.68695E+02	1.481 % *	6.65799E+05	34.6973	4.61841E-01	0.9981 *
* 214*	3.26538E+01*	1.58743E+03	0.813 %	* 6.53652E+02	1.071 % *	5.39637E+05	52.6734	4.10622E-01	0.9944 *
* 219*	3.34167E+01*	1.60981E+03	0.841 %	* 4.34078E+02	0.517 % *	3.80805E+05	60.9264	2.81764E-01	0.9978 *
* 224*	3.41797E+01*	1.68193E+03	0.918 %	* 3.16338E+02	0.251 % *	2.76025E+05	56.9344	1.87095E-01	0.9895 *
* 229*	3.49426E+01*	1.70919E+03	0.948 %	* 2.72599E+02	0.186 % *	2.40508E+05	30.8495	1.57863E-01	0.9797 *
* 234*	3.57056E+01*	1.60911E+03	0.841 %	* 3.32042E+02	0.276 % *	2.77632E+05	13.8433	2.05603E-01	0.9929 *
* 239*	3.64685E+01*	1.48315E+03	0.714 %	* 3.66556E+02	0.337 % *	2.82743E+05	11.1421	2.46462E-01	0.9945 *
* 244*	3.72314E+01*	1.38708E+03	0.625 %	* 3.97375E+02	0.395 % *	2.86617E+05	11.4228	2.85648E-01	0.9942 *
* 249*	3.79944E+01*	1.33718E+03	0.580 %	* 3.71848E+02	0.347 % *	2.58598E+05	17.4829	2.77319E-01	0.9945 *
* 254*	3.87573E+01*	1.23381E+03	0.494 %	* 3.35014E+02	0.281 % *	2.15378E+05	17.1363	2.71291E-01	0.9985 *
* 259*	3.95203E+01*	1.10302E+03	0.395 %	* 2.84184E+02	0.202 % *	1.62492E+05	20.5194	2.56092E-01	0.9880 *
* 264*	4.02832E+01*	9.45436E+02	0.290 %	* 2.39443E+02	0.144 % *	1.17365E+05	23.9497	2.51772E-01	0.9882 *
* 269*	4.10461E+01*	8.73757E+02	0.248 %	* 1.94706E+02	0.095 % *	8.68510E+04	25.0644	2.18134E-01	0.9582 *
* 274*	4.18091E+01*	8.29077E+02	0.223 %	* 1.79710E+02	0.081 % *	7.59015E+04	23.9368	2.11734E-01	0.9542 *
* 279*	4.25720E+01*	7.46212E+02	0.181 %	* 1.34127E+02	0.045 % *	4.96921E+04	15.4850	1.71117E-01	0.9063 *
* 284*	4.33350E+01*	6.60466E+02	0.142 %	* 1.29223E+02	0.042 % *	4.01161E+04	3.6218	1.76339E-01	0.8122 *
* 289*	4.40979E+01*	5.52770E+02	0.099 %	* 9.26689E+01	0.022 % *	2.32640E+04	7.2185	1.45991E-01	0.7584 *
* 294*	4.48609E+01*	4.57727E+02	0.068 %	* 8.57324E+01	0.018 % *	1.84237E+04	4.7688	1.58616E-01	0.8104 *
* 299*	4.56238E+01*	4.16167E+02	0.056 %	* 7.89839E+01	0.016 % *	1.65613E+04	-12.3793	1.93353E-01	0.9333 *
* 304*	4.63867E+01*	3.99002E+02	0.052 %	* 7.57159E+01	0.014 % *	1.49195E+04	-4.9533	1.79694E-01	0.8967 *
* 309*	4.71497E+01*	3.68319E+02	0.044 %	* 8.86348E+01	0.020 % *	1.61050E+04	-7.5186	2.27637E-01	0.8948 *
* 314*	4.79126E+01*	2.56915E+02	0.021 %	* 6.86215E+01	0.012 % *	8.60116E+03	-6.0961	2.49867E-01	0.8751 *
* 319*	4.86755E+01*	9.88265E+01	0.003 %	* 3.24470E+01	0.003 % *	1.13827E+03	-17.9473	2.23474E-01	0.4633 *
* 324*	4.94385E+01*	2.30678E+01	0.000 %	* 3.61333E+01	0.003 % *	7.76780E+01	188.7095	2.79908E-01	0.0319 *
* 329*	5.02014E+01*	1.50577E+01	0.000 %	* 4.25160E+01	0.005 % *	9.02811E+01	180.0835	7.53501E-01	0.0731 *
* 334*	5.09644E+01*	1.27237E+01	0.000 %	* 2.35608E+01	0.001 % *	5.54315E+01	50.9783	6.36533E-01	0.1257 *
* 339*	5.17273E+01*	1.14166E+01	0.000 %	* 2.23312E+01	0.001 % *	6.54098E+01	-73.1421	9.52273E-01	0.2420 *
* 344*	5.24902E+01*	2.56041E+01	0.000 %	* 3.40015E+01	0.003 % *	3.55461E+02	2.3696	1.03969E+00	0.6130 *
* 349*	5.32532E+01*	1.86733E+01	0.000 %	* 2.43286E+01	0.001 % *	1.50108E+02	2.9137	8.25455E-01	0.4019 *
* 354*	5.40161E+01*	7.33727E+00	0.000 %	* 2.51395E+01	0.002 % *	3.54713E+01	-23.3984	1.26341E+00	0.1350 *
* 359*	5.47790E+01*	1.46579E+01	0.000 %	* 3.02964E+01	0.002 % *	1.83962E+02	-21.6823	1.54178E+00	0.6307 *
* 364*	5.55420E+01*	7.55002E+00	0.000 %	* 1.92100E+01	0.001 % *	5.34425E+01	-22.6041	2.13410E+00	0.7035 *
* 369*	5.63049E+01*	4.56999E+00	0.000 %	* 1.44530E+01	0.001 % *	3.00305E+01	-7.4921	2.75716E+00	0.7600 *
* 374*	5.70679E+01*	5.70984E+00	0.000 %	* 1.67246E+01	0.001 % *	4.50580E+01	-26.3768	2.55063E+00	0.8189 *
* 379*	5.78308E+01*	4.75962E+00	0.000 %	* 1.47305E+01	0.001 % *	3.32813E+01	-0.0771	2.81699E+00	0.8285 *
* 384*	5.85937E+01*	4.44625E+00	0.000 %	* 1.22010E+01	0.000 % *	2.24195E+01	-22.3538	2.17455E+00	0.6280 *
* 389*	5.93567E+01*	2.76888E+01	0.000 %	* 1.76371E+01	0.001 % *	2.47080E+02	-37.0272	6.17958E-01	0.9412 *
* 394*	6.01196E+01*	8.29479E+01	0.002 %	* 5.14869E+01	0.007 % *	2.21935E+03	-37.7751	6.18507E-01	0.9929 *
* 399*	6.08825E+01*	4.22472E+00	0.000 %	* 7.05908E+00	0.000 % *	1.36695E+01	-32.6587	1.46854E+00	0.7724 *
* 404*	6.16455E+01*	5.15929E+00	0.000 %	* 1.29050E+01	0.000 % *	2.85786E+01	-51.6516	2.05869E+00	0.6774 *
* 409*	6.24084E+01*	4.88561E+00	0.000 %	* 1.39790E+01	0.000 % *	3.22549E+01	-11.3274	2.59112E+00	0.8201 *
* 414*	6.31714E+01*	9.75515E+00	0.000 %	* 1.33419E+01	0.001 % *	7.20179E+01	-13.6014	1.45112E+00	0.8514 *
* 419*	6.39343E+01*	3.60225E+00	0.000 %	* 1.77928E+01	0.001 % *	3.05323E+01	-38.4880	4.51173E+00	0.8343 *
* 424*	6.46973E+01*	4.76649E+00	0.000 %	* 1.54034E+01	0.001 % *	3.46362E+01	-20.6533	2.92323E+00	0.7214 *
* 429*	6.54602E+01*	2.97280E+00	0.000 %	* 1.51273E+01	0.001 % *	2.06527E+01	-17.5019	4.48099E+00	0.7755 *
* 434*	6.62231E+01*	5.01324E+00	0.000 %	* 1.89657E+01	0.001 % *	5.34877E+01	7.4075	2.83640E+00	0.8088 *
* 439*	6.69861E+01*	5.17530E+00	0.000 %	* 2.08072E+01	0.001 % *	4.91703E+01	-21.1649	3.52015E+00	0.7666 *
* 444*	6.77490E+01*	6.63034E+00	0.000 %	* 2.39983E+01	0.001 % *	7.48421E+01	7.8122	3.25441E+00	0.8134 *
******************		0.00000E+00	0.000 %	* 0.00000E+00	0.000 % *****	**********	**********	**********	**********

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****************************** 0.000 % ************ 0.000 % **

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SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS4 USER NAME....................GLM
SET - .SVG COMMENTS............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SVG COMMENTS.............. 1004 RUNTITLE FFID=621 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 1 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 59 CHAN = 47

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-P1F0	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-P1F7	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	3.05254E+01	0.006 %	5.96267E+02	-18.4342	8.11048E-01	0.9952
9	1.37329E+00	6.27024E+01	0.001 %	5.75944E+01	0.022 %	1.82553E+03	-15.6186	8.90354E-01	0.9396
14	2.13623E+00	1.05583E+02	0.004 %	6.43640E+01	0.028 %	2.80063E+03	-5.9205	4.81720E-01	0.6244
19	2.89917E+00	1.13164E+02	0.004 %	6.54405E+01	0.029 %	2.14529E+03	-61.8009	3.10157E-01	0.2979
24	3.66211E+00	1.50009E+02	0.007 %	3.79731E+01	0.010 %	9.54703E+02	-47.8717	8.13510E-02	0.1033
29	4.42505E+00	2.36315E+02	0.018 %	9.68490E+01	0.063 %	9.96212E+03	-0.6495	3.40614E-01	0.6937
34	5.18799E+00	2.02181E+02	0.013 %	4.34283E+01	0.013 %	2.96940E+03	68.6727	1.39290E-01	0.4205
39	5.95093E+00	3.03295E+02	0.030 %	9.82828E+01	0.055 %	1.33873E+04	-2.4796	2.79057E-01	0.7416
44	6.71387E+00	3.19848E+02	0.033 %	6.76684E+01	0.031 %	9.69682E+03	7.4466	1.81749E-01	0.7380
49	7.47681E+00	3.42754E+02	0.038 %	6.42701E+01	0.028 %	8.32232E+03	-30.6055	1.35834E-01	0.5243
54	8.23975E+00	3.85564E+02	0.048 %	7.00235E+01	0.033 %	1.34872E+04	24.7253	1.73963E-01	0.9175
59	9.00269E+00	4.20692E+02	0.057 %	5.14073E+01	0.018 %	1.10163E+04	18.0598	1.19354E-01	0.9540
64	9.76562E+00	5.00734E+02	0.081 %	8.93662E+01	0.054 %	2.26940E+04	15.4927	1.73551E-01	0.9456
69	1.05286E+01	5.14967E+02	0.086 %	7.43345E+01	0.037 %	1.86850E+04	17.8029	1.35103E-01	0.8760
74	1.12915E+01	5.76713E+02	0.108 %	8.22115E+01	0.045 %	2.19120E+04	11.8550	1.26326E-01	0.7853
79	1.20544E+01	5.65784E+02	0.104 %	7.57105E+01	0.040 %	2.21845E+04	11.6310	1.32886E-01	0.9606
84	1.28174E+01	5.19830E+02	0.088 %	6.66633E+01	0.030 %	1.75062E+04	40.6487	1.24198E-01	0.9381
89	1.35803E+01	5.09324E+02	0.084 %	6.29095E+01	0.027 %	1.64055E+04	14.8043	1.21264E-01	0.9639
94	1.43433E+01	5.18362E+02	0.087 %	5.40922E+01	0.020 %	1.30697E+04	40.5578	9.32675E-02	0.7988
99	1.51062E+01	5.39494E+02	0.094 %	6.22628E+01	0.026 %	1.69591E+04	22.0326	1.11728E-01	0.9372
104	1.58691E+01	6.04676E+02	0.119 %	6.09018E+01	0.025 %	1.81052E+04	36.8777	9.49484E-02	0.8887
109	1.66321E+01	6.52302E+02	0.138 %	6.80732E+01	0.031 %	2.24785E+04	29.2472	1.01298E-01	0.9422
114	1.73950E+01	6.31868E+02	0.130 %	6.58618E+01	0.030 %	2.13495E+04	35.2710	1.02533E-01	0.9389
119	1.81580E+01	5.91487E+02	0.114 %	5.42681E+01	0.020 %	1.60507E+04	46.2467	8.79700E-02	0.9193
124	1.89209E+01	6.14776E+02	0.123 %	5.76773E+01	0.022 %	1.76814E+04	35.5408	8.97039E-02	0.9142
129	1.96838E+01	6.59358E+02	0.141 %	6.52768E+01	0.030 %	2.18943E+04	38.0976	9.55670E-02	0.9229
134	2.04468E+01	7.28163E+02	0.172 %	7.25473E+01	0.035 %	2.64475E+04	31.5315	9.56441E-02	0.9216
139	2.12097E+01	7.90753E+02	0.203 %	6.90449E+01	0.032 %	2.81005E+04	37.1385	8.51715E-02	0.9745
144	2.19727E+01	8.78388E+02	0.251 %	7.37655E+01	0.037 %	3.36233E+04	36.6742	8.34457E-02	0.9887
149	2.27356E+01	9.57834E+02	0.298 %	8.20715E+01	0.045 %	4.06767E+04	27.3256	8.50208E-02	0.9845
154	2.34985E+01	1.06793E+03	0.370 %	8.95733E+01	0.054 %	4.95670E+04	30.9008	8.33367E-02	0.9872
159	2.42615E+01	1.16304E+03	0.439 %	9.56405E+01	0.062 %	5.75452E+04	32.9211	8.15732E-02	0.9840
164	2.50244E+01	1.14276E+03	0.424 %	9.84106E+01	0.065 %	5.82841E+04	31.1696	8.35798E-02	0.9876
169	2.57874E+01	1.24775E+03	0.505 %	1.06063E+02	0.075 %	6.86137E+04	35.8529	8.45050E-02	0.9883
174	2.65503E+01	1.37538E+03	0.614 %	1.23517E+02	0.103 %	8.84272E+04	30.9225	8.96337E-02	0.9952
179	2.73132E+01	1.48865E+03	0.719 %	1.29142E+02	0.112 %	1.00105E+05	36.3496	8.66173E-02	0.9969
184	2.80762E+01	1.54955E+03	0.780 %	1.31892E+02	0.117 %	1.05995E+05	33.3360	8.46457E-02	0.9890
189	2.88391E+01	1.65078E+03	0.885 %	1.41950E+02	0.136 %	1.22078E+05	34.8745	8.58991E-02	0.9979
194	2.96020E+01	1.72928E+03	0.971 %	1.53153E+02	0.158 %	1.37723E+05	29.2457	8.83092E-02	0.9942

199	3.13659E+01	1.78312E+03	1.035 %	1.46724E+02	0.145 %	1.35370E+05	33.2606	8.11870E-02	0.9799
204	3.11279E+01	1.78894E+03	1.059 %	1.63703E+02	0.180 %	1.52359E+05	38.7292	9.12866E-02	0.9951
209	3.18903E+01	1.66261E+03	0.837 %	1.44967E+02	0.141 %	1.25592E+05	44.2882	8.71187E-02	0.9983
214	3.26538E+01	1.58743E+03	0.818 %	1.34042E+02	0.121 %	1.10642E+05	42.6763	8.41898E-02	0.9941
219	3.34167E+01	1.60981E+03	0.841 %	1.31190E+02	0.116 %	1.09812E+05	43.0799	8.12518E-02	0.9941
224	3.41797E+01	1.68193E+03	0.918 %	1.33998E+02	0.121 %	1.17285E+05	40.1647	7.94984E-02	0.9957
229	3.49426E+01	1.70919E+03	0.948 %	1.40050E+02	0.132 %	1.24653E+05	38.3466	8.18221E-02	0.9971
234	3.57055E+01	1.60911E+03	0.841 %	1.24824E+02	0.105 %	1.04652E+05	39.3823	7.75005E-02	0.9981
239	3.64685E+01	1.48315E+03	0.714 %	1.12711E+02	0.086 %	8.66084E+04	41.3412	7.34951E-02	0.9869
244	3.72314E+01	1.38708E+03	0.626 %	1.09493E+02	0.081 %	7.93690E+04	42.1307	7.38009E-02	0.9355
249	3.79944E+01	1.33718E+03	0.580 %	9.29006E+01	0.058 %	5.45913E+04	45.1560	6.92676E-02	0.9940
254	3.87573E+01	1.23381E+03	0.494 %	8.51753E+01	0.049 %	5.46845E+04	44.2333	6.88810E-02	0.9956
259	3.95203E+01	1.10302E+03	0.395 %	7.33709E+01	0.036 %	4.20984E+04	45.0248	6.53482E-02	0.9949
264	4.02832E+01	9.45436E+02	0.290 %	6.35431E+01	0.029 %	3.21925E+04	41.5390	6.90591E-02	0.9923
269	4.10461E+01	8.73757E+02	0.248 %	5.93593E+01	0.024 %	2.68093E+04	38.9571	6.73355E-02	0.9821
274	4.18091E+01	8.29077E+02	0.223 %	5.77947E+01	0.022 %	2.48785E+04	38.0713	6.94008E-02	0.9912
279	4.25720E+01	7.46212E+02	0.181 %	4.54855E+01	0.014 %	1.76361E+04	42.1296	6.07307E-02	0.9926
284	4.33350E+01	6.60466E+02	0.142 %	4.30364E+01	0.012 %	1.45563E+04	36.9150	6.39861E-02	0.9643
289	4.40979E+01	5.52770E+02	0.099 %	3.68683E+01	0.009 %	1.03827E+04	40.0737	5.51555E-02	0.9543
294	4.48609E+01	4.57727E+02	0.068 %	2.52395E+01	0.004 %	5.91432E+03	41.4155	5.41279E-02	0.9636
299	4.56238E+01	4.16167E+02	0.056 %	2.72201E+01	0.005 %	4.94157E+03	25.0493	5.47091E-02	0.6995
304	4.63867E+01	3.99002E+02	0.052 %	2.38557E+01	0.004 %	4.73779E+03	44.8235	5.70630E-02	0.9109
309	4.71497E+01	3.68319E+02	0.044 %	2.34197E+01	0.004 %	4.36772E+03	31.5254	6.17359E-02	0.9427
314	4.79126E+01	2.56915E+02	0.021 %	1.86154E+01	0.002 %	2.22487E+03	25.6832	6.46333E-02	0.7957
319	4.86755E+01	9.83265E+01	0.003 %	1.03918E+01	0.001 %	4.98954E+02	10.3625	9.79587E-02	0.8679
324	4.94385E+01	2.30678E+01	0.000 %	5.22876E+00	0.000 %	2.67863E+01	25.6395	9.65229E-02	0.1813
329	5.02014E+01	1.50577E+01	0.000 %	5.56204E+00	0.000 %	3.54562E+01	-2.9544	2.99935E-01	0.6593
334	5.09644E+01	1.27237E+01	0.000 %	1.16231E+01	0.001 %	5.13577E+01	7.5700	6.08288E-01	0.4434
339	5.17273E+01	1.14166E+01	0.000 %	5.48987E+00	0.000 %	2.83702E+01	11.3749	4.12953E-01	0.7375
344	5.24902E+01	2.56041E+01	0.000 %	2.55680E+01	0.005 %	3.32371E+02	-24.8584	9.72154E-01	0.8778
349	5.32532E+01	1.86733E+01	0.000 %	1.35648E+01	0.001 %	1.25095E+02	4.0096	6.87907E-01	0.8968
354	5.40161E+01	7.33727E+00	0.000 %	4.45149E+00	0.000 %	9.73334E+00	-133.7161	3.46575E-01	0.3265
359	5.47790E+01	1.46579E+01	0.000 %	1.52310E+01	0.002 %	9.77012E+01	-32.4352	8.71940E-01	0.7041
364	5.55420E+01	7.55002E+00	0.000 %	7.08100E+00	0.000 %	1.66027E+01	-44.6943	5.58486E-01	0.3545
369	5.63049E+01	4.56999E+00	0.000 %	4.28493E+00	0.000 %	3.24433E+00	26.1540	4.81493E-01	0.2637
374	5.70679E+01	5.70984E+00	0.000 %	4.75041E+00	0.000 %	1.27980E+01	4.5139	7.52704E-01	0.8185
379	5.78308E+01	4.75962E+00	0.000 %	3.80502E+00	0.000 %	7.33718E+00	-2.2882	5.21031E-01	0.6035
384	5.85937E+01	4.44525E+00	0.000 %	3.66014E+00	0.000 %	5.30153E+00	-10.8784	5.14217E-01	0.3902
389	5.93567E+01	2.76888E+01	0.000 %	8.32105E+01	0.047 %	1.19732E+03	7.5034	2.99453E+00	0.9929
394	6.01196E+01	8.29479E+01	0.002 %	2.50973E+02	0.424 %	1.08513E+04	7.9261	3.02420E+00	0.9990
399	6.08825E+01	4.22472E+00	0.000 %	5.44435E+00	0.000 %	1.04845E+01	18.0049	1.12639E+00	0.7640
404	6.16455E+01	5.15929E+00	0.000 %	4.54295E+00	0.000 %	8.27943E+00	6.6162	5.96420E-01	0.4588
409	6.24084E+01	4.88561E+00	0.000 %	4.43961E+00	0.000 %	7.32590E+00	-31.9991	5.88509E-01	0.4194
414	6.31714E+01	9.75515E+00	0.000 %	1.51818E+01	0.002 %	5.94775E+01	-30.1926	1.39993E+00	0.8092
419	6.39343E+01	3.60225E+00	0.000 %	2.21122E+00	0.000 %	1.71159E+00	-213.1075	2.52920E-01	0.1698
424	6.46973E+01	4.76649E+00	0.000 %	4.67130E+00	0.000 %	5.58774E+00	-3.5633	5.55993E-01	0.3217
429	6.54602E+01	2.97280E+00	0.000 %	2.42867E+00	0.000 %	1.36810E+00	86.8132	2.96834E-01	0.1320
434	6.62231E+01	6.01324E+00	0.000 %	3.27420E+00	0.000 %	7.89665E+00	-33.1719	4.18752E-01	0.5915
439	6.69861E+01	5.17530E+00	0.000 %	3.83460E+00	0.000 %	3.64355E+00	63.8876	2.60847E-01	0.1239
444	6.77490E+01	6.63034E+00	0.000 %	2.34323E+00	0.000 %	5.58023E+00	-75.1334	2.43397E-01	0.4743
**********	**********	0.00000E+00	0.000 %	0.00000E+00	0.000 %	**********	**********	**********	**********
**********	**********	**********	0.000 %	**********	0.000 %	**********	**********	**********	**********

SET TITLE....................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JCASS% USER NAME...................GLM
SET - .SVS COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004 RUNTITLE FFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 50 CHAN = 48

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-PIF0	% OF VAR	OUTPUT IN UNITS OF NEWTONS AMPLITUDE G22-PIF9	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.75459E+01	0.000 %	3.73877E+01	0.053 %	7.17735E+02	-9.2195	9.76270E-01	0.9612
9	1.37329E+00	6.27024E+01	0.001 %	6.55148E+01	0.162 %	2.02002E+03	-4.1225	9.85182E-01	0.8890
14	2.13623E+00	1.05583E+02	0.004 %	6.77748E+01	0.174 %	2.22291E+03	-3.8321	3.82350E-01	0.3548
19	2.89917E+00	1.15154E+02	0.004 %	7.25507E+01	0.199 %	2.10249E+03	-82.8827	3.03969E-01	0.2328
24	3.66211E+00	1.50009E+02	0.007 %	5.13891E+01	0.100 %	1.58593E+03	-153.9147	1.35142E-01	0.1556
29	4.42505E+00	2.36915E+02	0.018 %	8.50287E+01	0.274 %	6.60651E+03	1.7341	2.25883E-01	0.3958
34	5.18799E+00	2.02181E+02	0.013 %	5.38689E+01	0.110 %	4.01345E+03	129.5131	1.88265E-01	0.4993
39	5.95093E+00	3.03295E+02	0.030 %	7.27304E+01	0.200 %	5.76961E+03	355.0707	1.41111E-01	0.3463
44	6.71387E+00	3.19848E+02	0.033 %	3.37949E+01	0.057 %	1.51220E+03	42.3162	2.83433E-02	0.0546
49	7.47681E+00	3.42754E+02	0.038 %	6.59513E+01	0.165 %	7.92240E+03	-113.8677	1.29307E-01	0.4516
54	8.23975E+00	3.85564E+02	0.048 %	2.79667E+01	0.030 %	3.07034E+03	113.0438	3.96026E-02	0.2981
59	9.00269E+00	4.20592E+02	0.057 %	2.40523E+01	0.022 %	4.09715E+03	-143.8676	4.43899E-02	0.6028
64	9.76562E+00	5.00734E+02	0.081 %	2.90318E+01	0.032 %	3.81088E+03	-26.6903	2.91434E-02	0.2527
69	1.05286E+01	5.14967E+02	0.086 %	3.07317E+01	0.036 %	2.84862E+03	-108.2556	2.05971E-02	0.1191
74	1.12915E+01	5.76713E+02	0.108 %	5.13537E+01	0.100 %	7.42971E+03	-101.1252	4.28334E-02	0.2314
79	1.20544E+01	5.65784E+02	0.104 %	3.44885E+01	0.045 %	8.05121E+03	-80.0638	4.82270E-02	0.6259
84	1.28174E+01	5.19980E+02	0.088 %	2.52319E+01	0.024 %	5.13421E+03	-194.8786	3.54248E-02	0.5632
89	1.35803E+01	5.03324E+02	0.084 %	2.72599E+01	0.028 %	6.15239E+03	-91.4511	4.54763E-02	0.7220
94	1.43433E+01	5.18362E+02	0.087 %	3.64748E+01	0.050 %	6.34828E+03	-158.2341	4.53023E-02	0.4145
99	1.51062E+01	5.39494E+02	0.094 %	2.65959E+01	0.027 %	5.52687E+03	-81.9898	3.54113E-02	0.5455
104	1.58691E+01	6.04676E+02	0.119 %	3.12340E+01	0.037 %	5.56915E+03	-143.7753	2.92061E-02	0.3197
109	1.66321E+01	6.52302E+02	0.138 %	2.47089E+01	0.023 %	4.54494E+03	-103.1164	2.04815E-02	0.2924
114	1.73950E+01	6.31868E+02	0.130 %	1.97386E+01	0.015 %	2.62165E+03	-128.3047	1.25907E-02	0.1625
119	1.81580E+01	5.91487E+02	0.114 %	2.52559E+01	0.026 %	6.25480E+03	-179.0069	3.42809E-02	0.5964
124	1.89209E+01	6.14776E+02	0.123 %	2.43564E+01	0.022 %	4.04932E+03	-149.3204	2.05437E-02	0.2689
129	1.96838E+01	6.59358E+02	0.141 %	2.27432E+01	0.020 %	4.53102E+03	-173.0170	1.99841E-02	0.3357
134	2.04468E+01	7.28163E+02	0.172 %	2.58023E+01	0.025 %	4.90349E+03	-134.9073	1.77328E-02	0.2504
139	2.12097E+01	7.90753E+02	0.203 %	2.56819E+01	0.025 %	9.33835E+03	-153.7820	2.86364E-02	0.7774
144	2.19727E+01	8.78988E+02	0.251 %	2.83271E+01	0.030 %	1.24375E+04	-149.1647	3.08671E-02	0.9174
149	2.27356E+01	9.57804E+02	0.298 %	3.15657E+01	0.038 %	1.46732E+04	-120.6647	3.06691E-02	0.8660
154	2.34983E+01	1.06793E+03	0.370 %	3.69686E+01	0.052 %	1.94795E+04	-128.2066	3.27507E-02	0.8951
159	2.42615E+01	1.15304E+03	0.439 %	3.94703E+01	0.059 %	2.25419E+04	-130.9871	3.19542E-02	0.8866
164	2.50244E+01	1.14276E+03	0.424 %	3.52485E+01	0.047 %	1.96564E+04	-119.5745	2.88620E-02	0.8755
169	2.57874E+01	1.24775E+03	0.505 %	3.53193E+01	0.047 %	2.15222E+04	-138.5474	2.55063E-02	0.8767
174	2.65503E+01	1.37538E+03	0.614 %	3.47033E+01	0.046 %	2.39589E+04	-114.3864	2.42959E-02	0.9272
179	2.73132E+01	1.48365E+03	0.713 %	3.43832E+01	0.045 %	2.58373E+04	-132.0153	2.23542E-02	0.9369
184	2.80762E+01	1.54955E+03	0.790 %	4.47159E+01	0.076 %	3.38065E+04	-120.7417	2.69973E-02	0.8752
189	2.88391E+01	1.65078E+03	0.885 %	4.29248E+01	0.070 %	3.62743E+04	-126.5776	2.55240E-02	0.9635
194	2.96020E+01	1.72928E+03	0.971 %	4.74824E+01	0.085 %	4.23621E+04	-115.2427	2.71630E-02	0.9786

* 199*	3.03650E+01*	1.78812E+03	1.038 %	* 6.51147E+01	0.160 % *	5.68605E+04	-113.0814	3.40994E-02	0.8769 *
* 204*	3.11279E+01*	1.78894E+03	1.039 %	* 3.56358E+01	0.051 % *	3.20408E+04	-110.3896	1.91974E-02	0.8787 *
* 209*	3.18909E+01*	1.66251E+03	0.897 %	* 3.17458E+01	0.039 % *	2.69420E+04	-133.3737	1.86887E-02	0.9583 *
* 214*	3.26538E+01*	1.58743E+03	0.813 %	* 2.92599E+01	0.032 % *	2.22365E+04	-118.2419	1.59201E-02	0.8427 *
* 219*	3.34167E+01*	1.60981E+03	0.941 %	* 2.97616E+01	0.034 % *	2.33859E+04	-121.9541	1.73036E-02	0.8760 *
* 224*	3.41797E+01*	1.68193E+03	0.918 %	* 3.32341E+01	0.042 % *	2.80632E+04	-109.5881	1.90218E-02	0.9267 *
* 229*	3.49426E+01*	1.70919E+03	0.948 %	* 2.83978E+01	0.031 % *	2.39067E+04	-92.2585	1.56917E-02	0.8920 *
* 234*	3.57055E+01*	1.60911E+03	0.941 %	* 2.60553E+01	0.026 % *	2.14741E+04	-99.2449	1.59028E-02	0.9638 *
* 239*	3.64685E+01*	1.43315E+03	0.714 %	* 2.47324E+01	0.023 % *	1.55300E+04	-115.9354	1.35372E-02	0.6590 *
* 244*	3.72314E+01*	1.38708E+03	0.625 %	* 1.33034E+01	0.007 % *	8.08725E+03	-132.0233	8.05984E-03	0.7052 *
* 249*	3.79944E+01*	1.33718E+03	0.580 %	* 2.41603E+01	0.022 % *	1.57631E+04	-152.7774	1.59042E-02	0.8753 *
* 254*	3.87573E+01*	1.23381E+03	0.494 %	* 2.23231E+01	0.019 % *	1.37503E+04	-154.0999	1.73200E-02	0.9164 *
* 259*	3.95203E+01*	1.10302E+03	0.395 %	* 2.31562E+01	0.020 % *	1.28520E+04	-156.2704	2.02552E-02	0.9309 *
* 264*	4.02832E+01*	9.45436E+02	0.230 %	* 1.53850E+01	0.010 % *	7.43663E+03	-152.5857	1.59531E-02	0.8473 *
* 269*	4.10461E+01*	8.73757E+02	0.248 %	* 2.02310E+01	0.015 % *	8.31563E+03	-136.1319	2.08854E-02	0.8135 *
* 274*	4.18091E+01*	8.29077E+02	0.223 %	* 1.34596E+01	0.009 % *	6.22301E+03	-135.7036	1.73596E-02	0.8667 *
* 279*	4.25720E+01*	7.46212E+02	0.181 %	* 2.13917E+01	0.017 % *	8.08575E+03	-142.8702	2.78436E-02	0.9434 *
* 284*	4.33350E+01*	6.60466E+02	0.142 %	* 1.88707E+01	0.013 % *	5.89733E+03	-133.3478	2.59229E-02	0.8232 *
* 289*	4.40979E+01*	5.52770E+02	0.099 %	* 1.51566E+01	0.009 % *	3.62717E+03	-140.4537	2.27619E-02	0.6891 *
* 294*	4.48608E+01*	4.57727E+02	0.068 %	* 1.56498E+01	0.010 % *	3.66572E+03	-137.6287	3.35487E-02	0.8506 *
* 299*	4.56238E+01*	4.16167E+02	0.056 %	* 2.21439E+01	0.019 % *	3.36505E+03	-106.7931	3.72552E-02	0.4902 *
* 304*	4.63867E+01*	3.93002E+02	0.052 %	* 1.37208E+01	0.007 % *	2.38727E+03	-139.1932	2.87528E-02	0.6991 *
* 309*	4.71497E+01*	3.68319E+02	0.044 %	* 1.26287E+01	0.006 % *	2.02905E+03	245.1440	2.86798E-02	0.6996 *
* 314*	4.79126E+01*	2.56915E+02	0.021 %	* 1.17810E+01	0.005 % *	9.92139E+02	260.9997	2.88220E-02	0.3951 *
* 319*	4.86755E+01*	9.88265E+01	0.003 %	* 6.75189E+00	0.002 % *	2.51395E+02	324.4461	4.93561E-02	0.5219 *
* 324*	4.94385E+01*	2.30678E+01	0.000 %	* 4.99029E+00	0.001 % *	9.62970E+00	307.9838	3.10965E-02	0.0207 *
* 329*	5.02014E+01*	1.50577E+01	0.000 %	* 5.04346E+00	0.001 % *	2.81895E+01	-23.4781	2.38396E-01	0.5065 *
* 334*	5.09644E+01*	1.27237E+01	0.000 %	* 1.16468E+01	0.005 % *	4.42433E+01	-2.5309	5.24024E-01	0.3277 *
* 339*	5.17273E+01*	1.14166E+01	0.000 %	* 4.11541E+00	0.001 % *	2.07898E+01	-3.9042	3.05849E-01	0.7199 *
* 344*	5.24902E+01*	2.55041E+01	0.000 %	* 2.78618E+01	0.029 % *	3.47105E+02	-22.9367	1.01525E+00	0.8705 *
* 349*	5.32532E+01*	1.86733E+01	0.000 %	* 1.58492E+01	0.010 % *	1.41897E+02	6.8751	7.80304E-01	0.8452 *
* 354*	5.40161E+01*	7.33727E+00	0.000 %	* 5.34713E+00	0.001 % *	1.35674E+01	-124.6567	4.83235E-01	0.3554 *
* 359*	5.47790E+01*	1.46579E+01	0.000 %	* 1.38814E+01	0.010 % *	1.01982E+02	-31.7738	9.10145E-01	0.7055 *
* 364*	5.55420E+01*	7.55002E+00	0.000 %	* 5.99647E+00	0.001 % *	1.58135E+01	-44.9693	5.31943E-01	0.4485 *
* 369*	5.63049E+01*	4.56999E+00	0.000 %	* 4.11335E+00	0.001 % *	3.37527E+00	51.4678	3.09890E-01	0.1185 *
* 374*	5.70679E+01*	5.70984E+00	0.000 %	* 3.72085E+00	0.001 % *	8.06125E+00	-0.2971	4.74116E-01	0.5293 *
* 379*	5.78308E+01*	4.75962E+00	0.000 %	* 3.71479E+00	0.001 % *	6.57377E+00	8.6578	5.56415E-01	0.5082 *
* 384*	5.85937E+01*	4.44625E+00	0.000 %	* 3.58024E+00	0.000 % *	7.30224E+00	-3.4788	7.08268E-01	0.7737 *
* 389*	5.93567E+01*	2.75888E+01	0.000 %	* 3.46068E+01	0.045 % *	4.99045E+02	-15.9692	1.24813E+00	0.9973 *
* 394*	6.01196E+01*	8.27479E+01	0.002 %	* 1.04783E+02	0.415 % *	4.53147E+03	-15.8923	1.26287E+00	0.9994 *
* 399*	6.08826E+01*	4.22472E+00	0.000 %	* 4.15149E+00	0.001 % *	7.89835E+00	8.0662	8.48537E-01	0.7456 *
* 404*	6.16455E+01*	5.15929E+00	0.000 %	* 3.56994E+00	0.000 % *	6.11375E+00	-4.6683	4.40411E-01	0.4051 *
* 409*	6.24084E+01*	4.88561E+00	0.000 %	* 4.23861E+00	0.001 % *	5.32181E+00	-48.2670	4.27515E-01	0.2428 *
* 414*	6.31714E+01*	9.75515E+00	0.000 %	* 1.41601E+01	0.008 % *	5.51831E+01	-31.3580	1.31340E+00	0.8187 *
* 419*	6.39343E+01*	3.60225E+00	0.000 %	* 1.35851E+00	0.000 % *	1.23751E+00	101.9772	1.92865E-01	0.1131 *
* 424*	6.46973E+01*	4.76649E+00	0.000 %	* 4.34443E+00	0.001 % *	6.37380E+00	6.2333	5.37937E-01	0.3483 *
* 429*	6.54602E+01*	2.97280E+00	0.000 %	* 2.58081E+00	0.000 % *	1.49083E+00	-204.0483	3.23464E-01	0.1388 *
* 434*	6.62231E+01*	6.01324E+00	0.000 %	* 3.75444E+00	0.001 % *	9.13299E+00	-55.9891	4.84313E-01	0.6017 *
* 439*	6.69861E+01*	5.17530E+00	0.000 %	* 3.14421E+00	0.000 % *	1.38003E+00	-2.5457	9.87980E-02	0.0264 *
* 444*	6.77490E+01*	3.63034E+00	0.000 %	* 2.30530E+00	0.007 % *	7.89803E+00	-71.1679	3.44491E-01	0.6627 *
*******************		0.00000E+00	0.000 %	* 0.00000E+00	0.007 %	**************************************			

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******************************** 0.000 % ************ 0.000 % **

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SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME..................BLM
SET - .SVL COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SVGL COMMENTS.............. 1004 RUNTITLE FFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS : VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 23 CHAN = 11

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-INFO	% OF VAR	OUTPUT IN UNITS OF MM AMPLITUDE G22-APIH	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.33302E+00	0.000 %	2.75339E-03	0.019 %	2.07882E-03	164.4057	3.58814E-04	0.1887
9	1.37329E+00	1.94845E+01	0.001 %	8.74047E-04	0.002 %	3.88844E-03	238.2176	1.96394E-05	0.1917
14	2.13623E+00	8.33417E+01	0.011 %	4.94171E-04	0.001 %	5.61279E-03	-44.6114	1.64947E-06	0.0683
19	2.89917E+00	1.27155E+02	0.027 %	3.32860E-04	0.000 %	8.28397E-03	-233.5447	9.52232E-07	0.1032
24	3.66211E+00	1.69353E+02	0.047 %	2.23188E-04	0.000 %	5.98589E-03	-132.8761	4.65482E-07	0.1252
29	4.42505E+00	1.98982E+02	0.065 %	9.12278E-05	0.000 %	4.92542E-03	-80.3956	2.38533E-07	0.2707
34	5.18799E+00	2.30687E+02	0.087 %	5.75816E-05	0.000 %	1.77817E-03	-53.4850	5.40700E-08	0.0659
39	5.95093E+00	2.66574E+02	0.116 %	7.19868E-05	0.000 %	3.19329E-03	208.5438	1.40132E-07	0.2693
44	6.71387E+00	3.11458E+02	0.159 %	5.08920E-05	0.000 %	5.77684E-03	156.7530	1.14188E-07	0.4884
49	7.47681E+00	3.51979E+02	0.203 %	4.34201E-05	0.000 %	8.36359E-03	191.6652	1.29446E-07	0.8500
54	8.23975E+00	3.74327E+02	0.229 %	6.99920E-05	0.000 %	1.28620E-02	202.4733	1.76292E-07	0.8875
59	9.00269E+00	4.14443E+02	0.281 %	4.95510E-05	0.000 %	9.66099E-03	236.2071	1.07851E-07	0.8137
64	9.76562E+00	4.57464E+02	0.342 %	2.71107E-05	0.000 %	5.35550E-03	102.6513	4.30700E-08	0.6856
69	1.05286E+01	4.81056E+02	0.379 %	1.18580E-04	0.000 %	2.94169E-02	126.8136	2.43745E-07	0.9778
74	1.12915E+01	5.31722E+02	0.463 %	1.59104E-04	0.000 %	4.65293E-02	160.1666	3.15564E-07	0.9845
79	1.20544E+01	5.10019E+02	0.426 %	1.91184E-04	0.000 %	5.07157E-02	161.9329	3.73852E-07	0.9946
84	1.28174E+01	4.77879E+02	0.374 %	2.36360E-04	0.000 %	5.84672E-02	169.9192	4.90915E-07	0.9851
89	1.35803E+01	4.45576E+02	0.325 %	2.97524E-04	0.000 %	6.66713E-02	182.4288	6.43623E-07	0.9953
94	1.43433E+01	4.65119E+02	0.354 %	3.74606E-04	0.000 %	9.07620E-02	199.4947	8.04463E-07	0.9977
99	1.51062E+01	4.55794E+02	0.340 %	4.77703E-04	0.001 %	1.13081E-01	232.4158	1.04371E-06	0.9917
104	1.58691E+01	5.08953E+02	0.424 %	4.33291E-04	0.000 %	1.14825E-01	273.8100	8.49982E-07	0.9968
109	1.66321E+01	5.25732E+02	0.454 %	2.99924E-04	0.000 %	7.95931E-02	295.4949	5.50090E-07	0.9988
114	1.73950E+01	4.98115E+02	0.406 %	1.93950E-04	0.000 %	5.01783E-02	312.0909	3.87781E-07	0.9917
119	1.81580E+01	4.64108E+02	0.352 %	1.16420E-04	0.000 %	2.80580E-02	327.2420	2.49775E-07	0.9913
124	1.89209E+01	4.62417E+02	0.350 %	7.24994E-05	0.000 %	1.73774E-02	335.6634	1.55829E-07	0.9879
129	1.96838E+01	4.79948E+02	0.377 %	4.52369E-05	0.000 %	1.11965E-02	340.8024	9.32016E-08	0.9778
134	2.04468E+01	5.09420E+02	0.425 %	2.81561E-05	0.000 %	7.29423E-03	30.6134	5.38960E-08	0.9509
139	2.12097E+01	5.39236E+02	0.476 %	2.75319E-05	0.000 %	7.65861E-03	167.1776	5.15035E-08	0.9784
144	2.19727E+01	5.77501E+02	0.545 %	4.94510E-05	0.000 %	1.45173E-02	190.3202	8.34698E-08	0.9898
149	2.27356E+01	5.94357E+02	0.578 %	6.20148E-05	0.000 %	1.91860E-02	198.1277	1.04137E-07	0.9962
154	2.34985E+01	6.31613E+02	0.653 %	8.38501E-05	0.000 %	2.76089E-02	197.0785	1.32702E-07	0.9992
159	2.42615E+01	6.55305E+02	0.703 %	1.05873E-04	0.000 %	3.61689E-02	202.0642	1.61502E-07	0.9992
164	2.50244E+01	6.04748E+02	0.598 %	1.06734E-04	0.000 %	3.36601E-02	209.3121	1.76480E-07	0.9999
169	2.57874E+01	6.25334E+02	0.643 %	1.11799E-04	0.000 %	3.65443E-02	215.1532	1.78339E-07	0.9998
174	2.65503E+01	6.40720E+02	0.672 %	1.14473E-04	0.000 %	3.82627E-02	214.3445	1.78607E-07	0.9993
179	2.73132E+01	6.49134E+02	0.690 %	1.14714E-04	0.000 %	3.88337E-02	212.0252	1.76681E-07	0.9998
184	2.80762E+01	6.25962E+02	0.641 %	1.26893E-04	0.000 %	4.14101E-02	204.6685	2.02647E-07	0.9993
189	2.88391E+01	6.15486E+02	0.620 %	1.49511E-04	0.000 %	4.79810E-02	207.6127	2.42864E-07	0.9995
194	2.96020E+01	5.91918E+02	0.573 %	1.73329E-04	0.000 %	5.27998E-02	207.9588	2.88961E-07	0.9738

* 199*	3.03655E+01*	5.74735E+02	0.540 %	* 1.69890E-04	0.000 % *	5.09190E-02	216.1207	2.95579E-07	0.9999 *
* 204*	3.11279E+01*	5.28760E+02	0.468 %	* 1.69764E-04	0.000 % *	4.68260E-02	219.3694	3.20901E-07	0.9998 *
* 209*	3.18990E+01*	4.59316E+02	0.394 %	* 1.61690E-04	0.000 % *	3.86839E-02	223.6550	3.52358E-07	0.9998 *
* 214*	3.26538E+01*	4.03798E+02	0.257 %	* 1.59731E-04	0.000 % *	3.36360E-02	228.2116	3.95554E-07	0.9999 *
* 219*	3.34167E+01*	3.76820E+02	0.232 %	* 1.72264E-04	0.000 % *	3.38471E-02	234.9701	4.57070E-07	0.9996 *
* 224*	3.41797E+01*	3.63781E+02	0.217 %	* 1.96427E-04	0.000 % *	3.72610E-02	244.9579	5.39888E-07	0.9997 *
* 229*	3.49426E+01*	3.52154E+02	0.203 %	* 2.25573E-04	0.000 % *	4.14195E-02	258.4942	6.40429E-07	0.9996 *
* 234*	3.57055E+01*	3.25590E+02	0.174 %	* 2.48687E-04	0.000 % *	4.22202E-02	277.3845	7.53205E-07	0.9990 *
* 239*	3.64685E+01*	3.04597E+02	0.152 %	* 2.49197E-04	0.000 % *	3.95703E-02	303.6555	8.17277E-07	0.9985 *
* 244*	3.72314E+01*	2.99079E+02	0.146 %	* 2.10613E-04	0.000 % *	3.28324E-02	328.5857	7.03818E-07	0.9989 *
* 249*	3.79944E+01*	3.15921E+02	0.153 %	* 1.62759E-04	0.000 % *	2.67743E-02	351.4122	5.14388E-07	0.9969 *
* 254*	3.87573E+01*	3.26239E+02	0.174 %	* 1.10321E-04	0.000 % *	1.87622E-02	5.8167	3.38020E-07	0.9992 *
* 259*	3.95203E+01*	3.32782E+02	0.181 %	* 7.07646E-05	0.000 % *	1.22734E-02	10.0432	2.12509E-07	0.9987 *
* 264*	4.02832E+01*	3.21818E+02	0.167 %	* 4.75852E-05	0.000 % *	7.98253E-03	2.3411	1.47792E-07	0.9990 *
* 269*	4.10461E+01*	3.38897E+02	0.188 %	* 4.09983E-05	0.000 % *	7.24282E-03	-8.8652	1.20921E-07	0.9991 *
* 274*	4.18091E+01*	3.62596E+02	0.215 %	* 4.14335E-05	0.000 % *	7.83295E-03	-17.9454	1.14238E-07	0.9995 *
* 279*	4.25720E+01*	3.65430E+02	0.218 %	* 4.05484E-05	0.000 % *	7.72682E-03	-20.2621	1.10948E-07	0.9998 *
* 284*	4.33350E+01*	3.55307E+02	0.207 %	* 3.68142E-05	0.000 % *	6.82007E-03	-21.7208	1.03589E-07	0.9995 *
* 289*	4.40979E+01*	3.26165E+02	0.174 %	* 3.14866E-05	0.000 % *	5.35472E-03	-23.3967	9.65143E-08	0.9996 *
* 294*	4.48608E+01*	2.98273E+02	0.146 %	* 2.80319E-05	0.000 % *	4.36001E-03	-25.1598	9.39693E-08	0.9998 *
* 299*	4.56238E+01*	2.95869E+02	0.143 %	* 2.65793E-05	0.000 % *	4.10042E-03	-24.5854	8.98172E-08	0.9997 *
* 304*	4.63867E+01*	3.20349E+02	0.169 %	* 2.71088E-05	0.000 % *	4.52853E-03	-25.8818	8.46146E-08	0.9998 *
* 309*	4.71497E+01*	3.21148E+02	0.169 %	* 2.61792E-05	0.000 % *	4.38437E-03	-26.8663	8.15130E-08	0.9999 *
* 314*	4.79126E+01*	2.39298E+02	0.094 %	* 1.85972E-05	0.000 % *	2.32068E-03	-26.2380	7.77078E-08	0.9998 *
* 319*	4.86755E+01*	9.19773E+01	0.014 %	* 6.83578E-06	0.000 % *	3.27365E-04	-26.2342	7.41995E-08	0.9968 *
* 324*	4.94385E+01*	2.40540E+01	0.001 %	* 1.85624E-06	0.000 % *	2.30069E-05	-22.6572	7.52455E-08	0.9762 *
* 329*	5.02014E+01*	1.69897E+01	0.000 %	* 1.48924E-06	0.000 % *	1.28023E-05	-29.2650	8.50441E-08	0.9413 *
* 334*	5.09644E+01*	1.60171E+01	0.000 %	* 1.52785E-06	0.000 % *	1.25217E-05	-28.8704	9.35899E-08	0.9626 *
* 339*	5.17273E+01*	1.48900E+01	0.000 %	* 1.48301E-06	0.000 % *	1.13605E-05	-20.4792	9.82517E-08	0.9732 *
* 344*	5.24902E+01*	1.51883E+01	0.000 %	* 1.41374E-06	0.000 % *	1.07297E-05	-19.7449	8.91864E-08	0.9181 *
* 349*	5.32532E+01*	1.71359E+01	0.000 %	* 1.69638E-06	0.000 % *	1.50755E-05	-14.4746	9.84436E-08	0.9889 *
* 354*	5.40161E+01*	2.27564E+01	0.001 %	* 1.86537E-06	0.000 % *	2.19545E-05	-16.2553	8.12925E-08	0.9835 *
* 359*	5.47790E+01*	2.38350E+01	0.001 %	* 1.89853E-06	0.000 % *	2.32517E-05	-14.0583	7.84791E-08	0.9707 *
* 364*	5.55420E+01*	1.73174E+01	0.000 %	* 1.51463E-06	0.000 % *	1.35758E-05	-4.7207	8.58017E-08	0.9847 *
* 369*	5.63049E+01*	2.36593E+01	0.001 %	* 2.12105E-06	0.000 % *	2.57803E-05	-5.0502	8.83117E-08	0.9704 *
* 374*	5.70679E+01*	2.33013E+01	0.001 %	* 2.45386E-06	0.000 % *	2.96392E-05	1.6452	1.04673E-07	0.9879 *
* 379*	5.78308E+01*	2.97601E+01	0.001 %	* 3.54565E-06	0.000 % *	5.55422E-05	21.9998	1.20250E-07	0.9636 *
* 384*	5.85937E+01*	3.45502E+01	0.002 %	* 4.55688E-06	0.000 % *	8.01591E-05	48.5793	1.28686E-07	0.9121 *
* 389*	5.93567E+01*	3.76406E+01	0.002 %	* 4.80578E-06	0.000 % *	9.05690E-05	91.0370	1.22573E-07	0.9217 *
* 394*	6.01196E+01*	4.84170E+01	0.004 %	* 3.14804E-06	0.000 % *	7.45685E-05	116.2836	5.09945E-08	0.8800 *
* 399*	6.08826E+01*	3.84496E+01	0.002 %	* 1.93342E-06	0.000 % *	3.64275E-05	145.0652	4.72474E-08	0.8828 *
* 404*	6.16455E+01*	5.04666E+01	0.004 %	* 1.48180E-06	0.000 % *	3.31749E-05	150.7537	2.49765E-08	0.7236 *
* 409*	6.24084E+01*	4.71486E+01	0.004 %	* 1.29652E-06	0.000 % *	2.87815E-05	184.7341	2.48260E-08	0.8151 *
* 414*	6.31714E+01*	4.67868E+01	0.004 %	* 1.22870E-06	0.000 % *	2.74895E-05	198.8786	2.40797E-08	0.8407 *
* 419*	6.39343E+01*	4.54306E+01	0.003 %	* 1.16740E-06	0.000 % *	2.42629E-05	202.7766	2.25411E-08	0.7695 *
* 424*	6.46973E+01*	4.83526E+01	0.004 %	* 1.18851E-06	0.000 % *	2.55015E-05	218.0320	2.09063E-08	0.7237 *
* 429*	6.54602E+01*	4.74633E+01	0.004 %	* 8.82895E-07	0.000 % *	1.81808E-05	223.2331	1.54749E-08	0.6921 *
* 434*	6.62231E+01*	5.32256E+01	0.005 %	* 1.11562E-06	0.000 % *	2.68310E-05	231.4883	1.91604E-08	0.7507 *
* 439*	6.69861E+01*	6.07947E+01	0.006 %	* 1.36492E-06	0.000 % *	3.83594E-05	217.6967	1.99008E-08	0.7857 *
* 444*	6.77490E+01*	7.38953E+01	0.009 %	* 1.60053E-06	0.000 % *******	************	********	**********	**********
*******	************	0.00000E+00	0.000 %	* 0.00000E+00	0.000 % *******	************	********	**********	**********
*******	************	************	********	************	************	************	********	**********	**********
*******	************	************	0.000 %	************	0.000 % *******	************	********	**********	**********
*******	************	************	********	************	************	************	********	**********	**********

SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JOAS54 USER NAME.................. GLM
SET - .SVD COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004 RUNTITLE FFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 3000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 25 CHAN = 13

I N D E X	FREQUENCY IN HERT	INPUT IN UNITS OF MM G11-AP1H	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP2H	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	2.75339E-03	0.019 %	4.23786E-03	3.572 %	3.08815E-06	-258.7108	7.91077E-01	0.2575
9	1.37329E+00	8.74047E-04	0.002 %	1.60733E-03	0.514 %	8.31205E-08	-255.6016	2.08626E-01	0.0129
14	2.13623E+00	4.94171E-04	0.001 %	4.57442E-04	0.042 %	1.53573E-08	-286.0335	1.20584E-01	0.0170
19	2.89917E+00	3.82360E-04	0.000 %	3.30212E-04	0.022 %	5.83493E-08	-122.8615	7.53290E-01	0.7832
24	3.66211E+00	2.23188E-04	0.000 %	2.01843E-04	0.008 %	6.78601E-09	-128.6872	2.51217E-01	0.0834
29	4.42505E+00	9.12278E-05	0.000 %	2.04121E-04	0.008 %	5.18422E-09	-281.3304	1.19442E+00	0.2850
34	5.18799E+00	5.75816E-05	0.000 %	9.32113E-05	0.002 %	7.15037E-10	33.9694	4.13515E-01	0.0653
39	5.95093E+00	7.19868E-05	0.000 %	7.02299E-05	0.001 %	1.25390E-09	-212.2233	4.63965E-01	0.2262
44	6.71387E+00	5.08920E-05	0.000 %	5.57848E-05	0.001 %	1.01027E-09	-192.8553	7.47942E-01	0.4656
49	7.47681E+00	4.94201E-05	0.000 %	4.80834E-05	0.000 %	8.52250E-10	-242.5035	5.59098E-01	0.4729
54	8.23975E+00	6.99920E-05	0.000 %	6.31799E-05	0.001 %	2.16702E-09	-255.1623	8.48197E-01	0.8829
59	9.00268E+00	4.95510E-05	0.000 %	1.21055E-04	0.003 %	2.93532E-09	-261.2267	2.29234E+00	0.8804
64	9.76562E+00	2.71107E-05	0.000 %	1.22590E-04	0.003 %	1.44353E-09	-90.8370	3.76595E+00	0.6936
69	1.05286E+01	1.18580E-04	0.000 %	9.91582E-05	0.002 %	5.99002E-09	-87.7693	8.16833E-01	0.9542
74	1.12915E+01	1.69104E-04	0.000 %	6.03446E-05	0.001 %	5.19390E-09	-91.6648	3.48271E-01	0.9525
79	1.20544E+01	1.91184E-04	0.000 %	4.42617E-05	0.000 %	4.21837E-09	-70.3239	2.21294E-01	0.9137
84	1.28174E+01	2.36360E-04	0.000 %	4.46366E-05	0.000 %	5.38392E-09	-36.1141	1.34791E-01	0.9575
89	1.35803E+01	2.87524E-04	0.000 %	4.70205E-05	0.000 %	5.85013E-09	0.7117	1.58884E-01	0.9439
94	1.43433E+01	3.74606E-04	0.000 %	6.27283E-05	0.001 %	1.21294E-08	28.9962	1.65737E-01	0.9796
99	1.51062E+01	4.77703E-04	0.001 %	1.08791E-04	0.002 %	2.70148E-08	38.4630	2.26994E-01	0.9935
104	1.58691E+01	4.33291E-04	0.000 %	1.22264E-04	0.003 %	2.76165E-08	46.4724	2.82060E-01	0.9992
109	1.66321E+01	2.83724E-04	0.000 %	9.83637E-05	0.002 %	1.48485E-08	50.3966	3.38723E-01	0.9963
114	1.73950E+01	1.93950E-04	0.000 %	7.37215E-05	0.001 %	7.45159E-09	45.2980	3.79840E-01	0.9986
119	1.81580E+01	1.16429E-04	0.000 %	5.52674E-05	0.001 %	3.40823E-09	30.8482	4.82100E-01	0.9951
124	1.89209E+01	7.24994E-05	0.000 %	4.97716E-05	0.000 %	1.85451E-09	9.1966	6.76537E-01	0.9712
129	1.96838E+01	4.52369E-05	0.000 %	6.37140E-05	0.001 %	1.49573E-09	2.2269	1.40152E+00	0.9902
134	2.04468E+01	2.81561E-05	0.000 %	7.58410E-05	0.001 %	1.09913E-09	-37.0878	2.65848E+00	0.9489
139	2.12097E+01	2.75319E-05	0.000 %	8.97862E-05	0.002 %	1.27402E-09	-175.0569	3.22279E+00	0.9765
144	2.19727E+01	4.84510E-05	0.000 %	1.04882E-04	0.002 %	2.62874E-09	-189.6708	2.14720E+00	0.9839
149	2.27356E+01	6.20148E-05	0.000 %	1.06644E-04	0.002 %	3.44364E-09	-193.4310	1.71694E+00	0.9969
154	2.34985E+01	8.38501E-05	0.000 %	1.31562E-04	0.003 %	5.75145E-09	-188.4539	1.56856E+00	0.9994
159	2.42615E+01	1.05873E-04	0.000 %	1.50804E-04	0.005 %	9.32349E-09	-182.8043	1.42385E+00	0.9992
164	2.50244E+01	1.06734E-04	0.000 %	1.44685E-04	0.004 %	8.05235E-09	-177.5741	1.35535E+00	0.9997
169	2.57874E+01	1.11709E-04	0.000 %	1.40333E-04	0.004 %	8.18092E-09	-175.6255	1.25503E+00	0.9997
174	2.65503E+01	1.14478E-04	0.000 %	1.53313E-04	0.005 %	9.15133E-09	-165.4231	1.33897E+00	0.9996
179	2.73132E+01	1.14714E-04	0.000 %	1.45685E-04	0.004 %	8.71475E-09	-152.4209	1.26994E+00	0.9998
184	2.80762E+01	1.26893E-04	0.000 %	1.37492E-04	0.004 %	9.09577E-09	-139.3898	1.08317E+00	0.9993
189	2.88391E+01	1.49511E-04	0.000 %	1.37130E-04	0.004 %	1.06843E-08	-133.9308	9.16544E-01	0.9986
194	2.96020E+01	1.73329E-04	0.000 %	1.61362E-04	0.005 %	1.36174E-08	-142.7538	8.69126E-01	0.8716

* 199*	3.03655E+01*	1.69890E-04	0.000 % *	1.22589E-04	0.003 % *	1.08601E-08	-114.5898	7.21492E-01	0.9997 *
* 204*	3.11279E+01*	1.69764E-04	0.000 % *	1.05617E-04	0.002 % *	9.34782E-09	-103.3936	6.21944E-01	0.9994 *
* 209*	3.18909E+01*	1.61580E-04	0.000 % *	8.03488E-05	0.001 % *	5.77287E-09	-88.8338	4.96807E-01	0.9994 *
* 214*	3.26538E+01*	1.59751E-04	0.000 % *	6.17710E-05	0.001 % *	5.14243E-09	-71.3562	3.86475E-01	0.9987 *
* 219*	3.34157E+01*	1.72264E-04	0.000 % *	4.67208E-05	0.000 % *	4.19473E-09	-48.5645	2.71048E-01	0.9988 *
* 224*	3.41797E+01*	1.96427E-04	0.000 % *	3.45923E-05	0.000 % *	3.54209E-09	-28.7588	1.76030E-01	0.9991 *
* 229*	3.49426E+01*	2.25573E-04	0.000 % *	4.72200E-05	0.000 % *	5.54595E-09	6.4784	2.08994E-01	0.9968 *
* 234*	3.57055E+01*	2.49547E-04	0.000 % *	6.59870E-05	0.001 % *	3.68145E-09	45.0540	2.59163E-01	0.9985 *
* 239*	3.64685E+01*	2.43147E-04	0.000 % *	8.50168E-05	0.001 % *	1.11745E-08	65.5660	3.45046E-01	0.9992 *
* 244*	3.72314E+01*	2.10613E-04	0.000 % *	8.84706E-05	0.002 % *	9.71601E-09	74.7959	4.19999E-01	0.9997 *
* 249*	3.79944E+01*	1.62759E-04	0.000 % *	8.45005E-05	0.001 % *	7.17165E-09	77.8150	5.19112E-01	0.9997 *
* 254*	3.87573E+01*	1.10321E-04	0.000 % *	7.53040E-05	0.001 % *	4.33203E-09	79.3903	6.82513E-01	0.9998 *
* 259*	3.95203E+01*	7.07646E-05	0.000 % *	6.73941E-05	0.001 % *	2.48523E-09	81.6675	9.52012E-01	0.9992 *
* 264*	4.02832E+01*	4.75952E-05	0.000 % *	6.57509E-05	0.001 % *	1.63075E-09	90.6446	1.38094E+00	0.9988 *
* 269*	4.10461E+01*	4.07383E-05	0.000 % *	7.32360E-05	0.001 % *	1.56520E-09	110.2819	1.78553E+00	0.9991 *
* 274*	4.18091E+01*	4.14335E-05	0.000 % *	7.87578E-05	0.001 % *	1.70155E-09	129.6035	1.90052E+00	0.9997 *
* 279*	4.25720E+01*	4.05484E-05	0.000 % *	7.71129E-05	0.001 % *	1.63043E-09	140.2382	1.90141E+00	0.9996 *
* 284*	4.33350E+01*	3.68142E-05	0.000 % *	7.11940E-05	0.001 % *	1.36674E-09	149.2051	1.93369E+00	0.9998 *
* 289*	4.40979E+01*	3.14866E-05	0.000 % *	6.08083E-05	0.001 % *	9.98419E-10	157.8876	1.93104E+00	0.9998 *
* 294*	4.48608E+01*	2.80319E-05	0.000 % *	5.17346E-05	0.001 % *	7.56188E-10	165.8311	1.84525E+00	0.9997 *
* 299*	4.56238E+01*	2.65783E-05	0.000 % *	4.62916E-05	0.000 % *	6.41525E-10	170.1572	1.74137E+00	0.9996 *
* 304*	4.63867E+01*	2.71088E-05	0.000 % *	4.87924E-05	0.000 % *	5.89695E-10	175.5893	1.79956E+00	0.9997 *
* 309*	4.71497E+01*	2.61792E-05	0.000 % *	4.75561E-05	0.000 % *	6.48998E-10	184.5585	1.81577E+00	0.9991 *
* 314*	4.79126E+01*	1.85972E-05	0.000 % *	3.36115E-05	0.000 % *	3.25873E-10	192.0500	1.80671E+00	0.9993 *
* 319*	4.86755E+01*	6.83578E-06	0.000 % *	1.23080E-05	0.000 % *	4.36415E-11	198.0142	1.79083E+00	0.9893 *
* 324*	4.94385E+01*	1.85524E-06	0.000 % *	2.59012E-06	0.000 % *	2.44813E-12	199.7421	1.36236E+00	0.8837 *
* 329*	5.02014E+01*	1.49724E-06	0.000 % *	1.34575E-06	0.000 % *	1.32935E-12	212.6870	1.14933E+00	0.8593 *
* 334*	5.09644E+01*	1.52785E-06	0.000 % *	1.52177E-06	0.000 % *	1.20959E-12	220.4229	9.93587E-01	0.8762 *
* 339*	5.17273E+01*	1.48301E-06	0.000 % *	1.42393E-06	0.000 % *	1.02338E-12	236.7376	8.92238E-01	0.8641 *
* 344*	5.24902E+01*	1.41374E-06	0.000 % *	1.53469E-06	0.000 % *	8.25968E-13	254.3360	7.92422E-01	0.4697 *
* 349*	5.32532E+01*	1.69638E-06	0.000 % *	1.54840E-06	0.000 % *	1.01360E-12	295.1560	6.75385E-01	0.5475 *
* 354*	5.40161E+01*	1.86537E-06	0.000 % *	2.36253E-06	0.000 % *	1.32911E-12	261.7627	7.32416E-01	0.3344 *
* 359*	5.47790E+01*	1.89853E-06	0.000 % *	2.20029E-06	0.000 % *	1.25539E-12	315.3259	6.58372E-01	0.3325 *
* 364*	5.55420E+01*	1.51463E-06	0.000 % *	2.05354E-06	0.000 % *	9.51284E-13	34.4928	7.95108E-01	0.3433 *
* 369*	5.63049E+01*	2.12105E-06	0.000 % *	2.20033E-06	0.000 % *	1.53325E-12	3.0681	6.53496E-01	0.3968 *
* 374*	5.70679E+01*	2.45386E-06	0.000 % *	2.35956E-06	0.000 % *	3.10322E-12	-0.9279	9.38194E-01	0.8975 *
* 379*	5.78308E+01*	3.64565E-06	0.000 % *	2.61728E-06	0.000 % *	4.38593E-12	-38.7989	6.32764E-01	0.7768 *
* 384*	5.85937E+01*	4.65688E-06	0.000 % *	4.75600E-06	0.000 % *	1.12841E-11	-46.6839	9.97719E-01	0.9544 *
* 389*	5.93567E+01*	4.80578E-06	0.000 % *	6.09726E-06	0.000 % *	1.49751E-11	-61.8295	1.24329E+00	0.9603 *
* 394*	6.01195E+01*	3.14804E-06	0.000 % *	5.38711E-06	0.000 % *	8.44313E-12	-69.3707	1.63363E+00	0.9113 *
* 399*	6.08826E+01*	1.93342E-06	0.000 % *	3.92224E-06	0.000 % *	3.85125E-12	-83.5084	1.97552E+00	0.9483 *
* 404*	6.16455E+01*	1.48180E-06	0.000 % *	3.86974E-06	0.000 % *	2.71327E-12	-84.3679	2.36944E+00	0.8232 *
* 409*	6.24084E+01*	1.29652E-06	0.000 % *	3.69714E-06	0.000 % *	2.37037E-12	-121.2672	2.70386E+00	0.8991 *
* 414*	6.31714E+01*	1.22870E-06	0.000 % *	3.58640E-06	0.000 % *	2.27075E-12	-142.7596	2.88410E+00	0.9241 *
* 419*	6.39343E+01*	1.15740E-06	0.000 % *	3.92821E-06	0.000 % *	2.28774E-12	-141.2039	3.21891E+00	0.9150 *
* 424*	6.46973E+01*	1.18351E-06	0.000 % *	3.77732E-06	0.000 % *	2.25513E-12	-138.1476	3.06132E+00	0.8805 *
* 429*	6.54602E+01*	8.82895E-07	0.000 % *	3.80974E-06	0.000 % *	1.65953E-12	-137.9544	4.08222E+00	0.8950 *
* 434*	6.62231E+01*	1.11562E-06	0.000 % *	3.87949E-06	0.000 % *	2.17521E-12	-129.0668	3.35119E+00	0.9287 *
* 439*	6.69861E+01*	1.36492E-06	0.000 % *	3.42224E-06	0.000 % *	2.33316E-12	-122.2799	2.40137E+00	0.9173 *
* 444*	6.77490E+01*	1.60953E-06	0.000 % *	3.92845E-06	0.001 % *	3.19305E-12	-132.7135	2.39075E+00	0.9452 *
******************		0.00000E+00	0.000 % *	0.00000E+00	0.009 %	******************************			

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******************************* 0.000 % ************ 0.000 % **

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SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME..................RLM
SET - .SVD COMMENTS............... INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNG_ COMMENTS.............. 1004 RUNTITLE FFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 1 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 26 CHAN = 19

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-AP1H	INPUT AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP3H	OUTPUT AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	2.75339E-03	0.019 %	3.00497E-03	1.863 %	1.26855E-06	-215.4267	3.20850E-01	0.0864
9	1.37329E+00	8.74047E-04	0.002 %	1.42870E-03	0.421 %	2.12109E-07	-353.8347	5.32376E-01	0.1061
14	2.13623E+00	4.94171E-04	0.001 %	9.59718E-04	0.190 %	1.56498E-07	-99.6946	1.22881E+00	0.4003
19	2.89917E+00	3.82860E-04	0.000 %	4.55901E-04	0.043 %	4.63422E-08	74.6083	6.06215E-01	0.2592
24	3.66211E+00	2.23188E-04	0.000 %	3.04343E-04	0.019 %	1.45750E-08	324.5741	5.61043E-01	0.1693
29	4.42505E+00	9.12278E-05	0.000 %	2.37602E-04	0.012 %	5.37544E-09	187.0744	1.23848E+00	0.2261
34	5.18799E+00	5.75816E-05	0.000 %	1.61200E-04	0.005 %	7.59348E-10	194.5919	4.39141E-01	0.0246
39	5.95093E+00	7.19868E-05	0.000 %	1.13000E-04	0.003 %	2.34187E-09	-63.4777	8.56534E-01	0.3047
44	6.71387E+00	5.08920E-05	0.000 %	9.87327E-05	0.002 %	1.48994E-09	-6.4889	1.10306E+00	0.3233
49	7.47681E+00	4.94201E-05	0.000 %	8.43948E-05	0.001 %	1.78445E-09	-24.9495	1.40097E+00	0.6730
54	8.23975E+00	6.99920E-05	0.000 %	6.38527E-05	0.001 %	2.10739E-09	-13.3519	8.24856E-01	0.8175
59	9.00269E+00	4.95510E-05	0.000 %	1.64973E-05	0.000 %	8.69623E-11	104.5185	5.79134E-02	0.0416
64	9.76562E+00	2.71107E-05	0.000 %	6.23941E-05	0.001 %	7.05519E-10	-30.7368	1.84059E+00	0.6396
69	1.05286E+01	1.18580E-04	0.000 %	8.01849E-05	0.001 %	4.72791E-09	-23.4919	5.44725E-01	0.9091
74	1.12915E+01	1.69104E-04	0.000 %	9.34427E-05	0.002 %	8.14735E-09	-28.6157	5.46311E-01	0.9775
79	1.20544E+01	1.91184E-04	0.000 %	8.59198E-05	0.002 %	8.46225E-09	-14.6481	4.43927E-01	0.9534
84	1.28174E+01	2.36360E-04	0.000 %	7.99780E-05	0.001 %	9.72802E-09	-10.6558	3.33893E-01	0.9737
89	1.35803E+01	2.87524E-04	0.000 %	7.52912E-05	0.001 %	1.12145E-08	-2.3023	2.50115E-01	0.9867
94	1.43433E+01	3.74606E-04	0.000 %	6.13349E-05	0.001 %	1.19425E-08	-4.7078	1.53184E-01	0.9933
99	1.51062E+01	4.77703E-04	0.001 %	4.83400E-05	0.000 %	1.19754E-08	-14.8698	1.00625E-01	0.9888
104	1.58691E+01	4.33291E-04	0.000 %	2.41456E-05	0.000 %	5.28263E-09	-42.1167	5.39539E-02	0.9374
109	1.66321E+01	2.89924E-04	0.000 %	2.11607E-05	0.000 %	3.11187E-09	-105.5300	7.09875E-02	0.9460
114	1.73950E+01	1.93750E-04	0.000 %	2.90553E-05	0.000 %	2.90894E-09	-127.5079	1.48282E-01	0.9797
119	1.81580E+01	1.16429E-04	0.000 %	3.10639E-05	0.000 %	1.85841E-09	-125.2766	2.52875E-01	0.9708
124	1.89209E+01	7.24994E-05	0.000 %	3.90843E-05	0.000 %	1.46418E-09	-115.5257	5.34142E-01	0.9817
129	1.96838E+01	4.52369E-05	0.000 %	4.00468E-05	0.000 %	9.35561E-10	-100.7076	8.76631E-01	0.9806
134	2.04468E+01	2.81561E-05	0.000 %	3.53683E-05	0.000 %	4.95412E-10	-124.5712	1.19826E+00	0.9100
139	2.12097E+01	2.75319E-05	0.000 %	3.92615E-05	0.000 %	5.57841E-10	-245.2850	1.41113E+00	0.9792
144	2.19727E+01	4.84510E-05	0.000 %	3.54884E-05	0.000 %	8.91800E-10	-249.0370	7.28438E-01	0.9890
149	2.27356E+01	6.20148E-05	0.000 %	3.59853E-05	0.000 %	1.16133E-09	-255.3635	5.79048E-01	0.9958
154	2.34985E+01	8.38501E-05	0.000 %	4.70409E-05	0.000 %	2.05173E-09	-232.9556	5.59571E-01	0.9949
159	2.42615E+01	1.05873E-04	0.000 %	5.06681E-05	0.001 %	2.79383E-09	-212.8381	4.77932E-01	0.9973
164	2.50244E+01	1.06734E-04	0.000 %	4.31577E-05	0.000 %	2.40023E-09	-194.7714	4.04009E-01	0.9983
169	2.57874E+01	1.11799E-04	0.000 %	3.83737E-05	0.000 %	2.23227E-09	-198.2717	3.42455E-01	0.9954
174	2.65503E+01	1.14478E-04	0.000 %	5.37620E-05	0.001 %	3.20521E-09	-175.8751	4.58965E-01	0.9972
179	2.73132E+01	1.14714E-04	0.000 %	5.17952E-05	0.001 %	3.09583E-09	-150.7624	4.51244E-01	0.9988
184	2.80762E+01	1.26393E-04	0.000 %	5.32153E-05	0.001 %	3.52081E-09	-129.0963	4.19274E-01	0.9995
189	2.88391E+01	1.49311E-04	0.000 %	5.55523E-05	0.001 %	4.32198E-09	-118.3152	3.70739E-01	0.9956
194	2.96020E+01	1.73329E-04	0.000 %	6.02619E-05	0.001 %	4.65841E-09	-120.9244	2.97323E-01	0.7313

* 199*	3.03650E+01*	1.69890E-04	0.000	% *	6.95960E-05	0.001	% *	5.16490E-09	-88.1134	4.09564E-01	0.9996	*
* 204*	3.11270E+01*	1.69764E-04	0.000	% *	7.45484E-05	0.001	% *	5.59823E-09	-75.1494	4.39007E-01	0.9994	*
* 209*	3.18909E+01*	1.61680E-04	0.000	% *	7.57015E-05	0.001	% *	6.38173E-09	-59.1474	4.68116E-01	0.9996	*
* 214*	3.26538E+01*	1.59751E-04	0.000	% *	7.59585E-05	0.001	% *	6.40914E-09	-44.3480	4.81670E-01	0.9995	*
* 219*	3.34167E+01*	1.72264E-04	0.000	% *	7.90644E-05	0.001	% *	7.10161E-09	-30.8874	4.58877E-01	0.9996	*
* 224*	3.41797E+01*	1.96427E-04	0.000	% *	8.15269E-05	0.001	% *	8.35121E-09	-25.1214	4.15026E-01	0.9999	*
* 229*	3.49426E+01*	2.25573E-04	0.000	% *	9.29865E-05	0.002	% *	1.09383E-08	-21.2314	4.12199E-01	0.9999	*
* 234*	3.57055E+01*	2.48687E-04	0.000	% *	9.08227E-05	0.002	% *	1.17777E-08	-17.8887	3.65161E-01	0.9997	*
* 239*	3.64685E+01*	2.49197E-04	0.000	% *	8.33294E-05	0.001	% *	1.08262E-08	-24.7726	3.34288E-01	0.9994	*
* 244*	3.72314E+01*	2.10513E-04	0.000	% *	8.25893E-05	0.001	% *	9.06809E-09	-33.4036	3.91991E-01	0.9992	*
* 249*	3.79944E+01*	1.62759E-04	0.000	% *	9.14823E-05	0.002	% *	7.74642E-09	-37.8774	5.50716E-01	0.9952	*
* 254*	3.87573E+01*	1.10321E-04	0.000	% *	9.32309E-05	0.002	% *	5.36131E-09	-33.4315	8.44672E-01	0.9990	*
* 259*	3.95203E+01*	7.07646E-05	0.000	% *	9.05204E-05	0.002	% *	3.33625E-09	-20.4288	1.27749E+00	0.9974	*
* 264*	4.02832E+01*	4.75352E-05	0.000	% *	8.22911E-05	0.001	% *	2.04060E-09	3.4776	1.72800E+00	0.9985	*
* 269*	4.10461E+01*	4.09983E-05	0.000	% *	7.73704E-05	0.001	% *	1.65270E-09	31.8421	1.88535E+00	0.9981	*
* 274*	4.18091E+01*	4.14335E-05	0.000	% *	7.15989E-05	0.001	% *	1.54684E-09	55.9340	1.72771E+00	0.9996	*
* 279*	4.25720E+01*	4.05484E-05	0.000	% *	6.26762E-05	0.001	% *	1.32533E-09	70.3898	1.34564E+00	0.9999	*
* 284*	4.33350E+01*	3.68142E-05	0.000	% *	5.36396E-05	0.001	% *	1.02961E-09	82.0352	1.45670E+00	0.9995	*
* 289*	4.40979E+01*	3.14866E-05	0.000	% *	4.35901E-05	0.000	% *	7.15670E-10	92.3102	1.38418E+00	0.9997	*
* 294*	4.48508E+01*	2.80319E-05	0.000	% *	3.55407E-05	0.000	% *	5.19441E-10	102.1037	1.26754E+00	0.9995	*
* 299*	4.56238E+01*	2.65783E-05	0.000	% *	3.16468E-05	0.000	% *	4.38579E-10	107.5613	1.19049E+00	0.9996	*
* 304*	4.63867E+01*	2.71088E-05	0.000	% *	3.23181E-05	0.000	% *	4.56773E-10	117.0122	1.19182E+00	0.9994	*
* 309*	4.71497E+01*	2.61792E-05	0.000	% *	2.92054E-05	0.000	% *	3.98519E-10	128.5719	1.11496E+00	0.9989	*
* 314*	4.79126E+01*	1.85972E-05	0.000	% *	1.94864E-05	0.000	% *	1.88937E-10	137.5048	1.04749E+00	0.9994	*
* 319*	4.86755E+01*	6.83578E-06	0.000	% *	7.00648E-06	0.000	% *	2.48053E-11	144.9212	1.01788E+00	0.9862	*
* 324*	4.94385E+01*	1.85524E-06	0.000	% *	1.50817E-06	0.000	% *	1.47509E-12	142.4167	8.20877E-01	0.8973	*
* 329*	5.02014E+01*	1.48924E-06	0.000	% *	8.85807E-07	0.000	% *	5.34643E-13	148.5480	4.52241E-01	0.6039	*
* 334*	5.09644E+01*	1.52785E-06	0.000	% *	7.45074E-07	0.000	% *	5.02304E-13	167.4858	4.12604E-01	0.7157	*
* 339*	5.17273E+01*	1.48301E-06	0.000	% *	4.51337E-07	0.000	% *	2.62802E-13	179.6740	2.29124E-01	0.5668	*
* 344*	5.24902E+01*	1.41374E-06	0.000	% *	6.89310E-07	0.000	% *	3.98603E-13	185.2948	3.82416E-01	0.6151	*
* 349*	5.32532E+01*	1.69638E-06	0.000	% *	4.32107E-07	0.000	% *	2.14333E-13	229.6709	1.42817E-01	0.3144	*
* 354*	5.40161E+01*	1.85537E-06	0.000	% *	5.78354E-07	0.000	% *	3.00563E-13	176.3096	1.55628E-01	0.2854	*
* 359*	5.47790E+01*	1.89853E-06	0.000	% *	7.55681E-07	0.000	% *	3.72044E-13	284.3514	1.97917E-01	0.2472	*
* 364*	5.55420E+01*	1.51463E-06	0.000	% *	7.83928E-07	0.000	% *	4.69249E-13	2.2132	3.32209E-01	0.5742	*
* 369*	5.63049E+01*	2.12105E-06	0.000	% *	9.84039E-07	0.000	% *	8.39451E-13	-0.3203	3.57785E-01	0.5947	*
* 374*	5.70679E+01*	2.45386E-06	0.000	% *	1.27795E-06	0.000	% *	1.57723E-12	4.3313	5.02263E-01	0.9301	*
* 379*	5.78308E+01*	3.64565E-06	0.000	% *	1.16578E-06	0.000	% *	1.86740E-12	-17.1809	2.59412E-01	0.7098	*
* 384*	5.85937E+01*	4.65588E-06	0.000	% *	1.87572E-06	0.000	% *	4.30975E-12	-35.1119	3.81059E-01	0.8950	*
* 389*	5.93567E+01*	4.80578E-06	0.000	% *	2.31897E-06	0.000	% *	5.61901E-12	-55.0228	4.56510E-01	0.9347	*
* 394*	6.01196E+01*	3.14804E-06	0.000	% *	2.04166E-06	0.000	% *	3.07858E-12	-67.9040	5.95660E-01	0.8436	*
* 399*	6.08826E+01*	1.93342E-06	0.000	% *	1.37929E-06	0.000	% *	1.33694E-12	-94.5039	6.95789E-01	0.9241	*
* 404*	6.16455E+01*	1.48180E-06	0.000	% *	1.55721E-06	0.000	% *	9.77849E-13	-100.3212	8.53934E-01	0.6603	*
* 409*	6.24084E+01*	1.29652E-06	0.000	% *	1.31093E-06	0.000	% *	7.61175E-13	-149.6248	8.58269E-01	0.7374	*
* 414*	6.31714E+01*	1.22870E-06	0.000	% *	1.52700E-06	0.000	% *	8.26941E-13	-180.2281	1.05030E+00	0.7142	*
* 419*	6.39343E+01*	1.16740E-06	0.000	% *	1.77317E-06	0.000	% *	9.27842E-13	-178.2699	1.30546E+00	0.7387	*
* 424*	6.46973E+01*	1.18851E-06	0.000	% *	1.99962E-06	0.000	% *	1.01701E-12	-183.5458	1.38055E+00	0.6733	*
* 429*	6.54602E+01*	8.82895E-07	0.000	% *	2.20141E-06	0.000	% *	8.38187E-13	-180.5107	2.06183E+00	0.6838	*
* 434*	6.62231E+01*	1.11562E-06	0.000	% *	2.06698E-06	0.000	% *	9.64085E-13	-173.4376	1.48530E+00	0.6427	*
* 439*	6.69861E+01*	1.36492E-06	0.000	% *	1.79024E-06	0.000	% *	1.03898E-12	-177.0263	1.06936E+00	0.6647	*
* 444*	6.77490E+01*	1.60933E-06	0.000	% *	2.25623E-06	0.000	% *	1.56444E-12	-182.1647	1.24585E+00	0.7811	*
******************		0.00000E+00	0.000	% *	0.00000E+00	0.000	%	**************************				
**												
*****************************			0.000	% ************		0.000	%	**************************				
**												

SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JCASS; USER NAME ....GLM
SET - .SVS COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS.............. 1004 RUNTITLE FFID=521 30 + 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 27 CHAN = 13

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-AP1H	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP4H	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	2.75339E-03	0.019 %	3.11143E-03	0.738 %	1.75457E-06	283.2607	4.43779E-01	0.1542
9	1.37329E+00	8.74047E-04	0.002 %	1.37333E-03	0.144 %	4.77027E-07	-148.1247	1.19730E+00	0.5807
14	2.13623E+00	4.94171E-04	0.001 %	9.38494E-04	0.067 %	5.63765E-08	-228.7807	5.21183E-01	0.0753
19	2.89917E+00	3.82360E-04	0.000 %	2.60305E-04	0.005 %	2.53751E-08	6.9126	3.31939E-01	0.2384
24	3.66211E+00	2.23188E-04	0.000 %	1.70143E-04	0.002 %	5.71695E-09	4.4399	2.20066E-01	0.0833
29	4.42505E+00	1.12278E-05	0.000 %	1.35155E-04	0.001 %	3.06905E-09	25.5021	7.07099E-01	0.2273
34	5.18799E+00	5.75816E-05	0.000 %	1.02738E-04	0.001 %	1.69187E-09	329.8893	9.78429E-01	0.3007
39	5.95093E+00	7.19868E-05	0.000 %	4.52984E-05	0.000 %	1.23496E-09	124.6614	4.56958E-01	0.5273
44	6.71387E+00	5.08920E-05	0.000 %	5.49772E-05	0.000 %	3.06727E-10	318.7009	3.75150E-01	0.1206
49	7.47681E+00	4.94231E-05	0.000 %	2.54654E-05	0.000 %	3.77432E-10	5.2681	2.96320E-01	0.3062
54	8.23975E+00	5.99920E-05	0.000 %	3.06467E-05	0.000 %	7.59197E-10	23.7888	2.97158E-01	0.4606
59	9.00269E+00	4.95510E-05	0.000 %	2.95524E-05	0.000 %	4.54812E-10	-213.5497	3.55187E-01	0.3547
64	9.76562E+00	2.71107E-05	0.000 %	5.65669E-05	0.000 %	5.77801E-10	-3.0949	1.76828E+00	0.7182
69	1.05286E+01	1.18580E-04	0.000 %	5.73119E-05	0.000 %	3.32569E-09	11.4552	4.53511E-01	0.8805
74	1.12915E+01	1.69104E-04	0.000 %	6.40234E-05	0.000 %	5.54151E-09	-3.9793	3.71579E-01	0.9632
79	1.20544E+01	1.91184E-04	0.000 %	6.56372E-05	0.000 %	5.46263E-09	12.3259	3.39027E-01	0.9752
84	1.28174E+01	2.36360E-04	0.000 %	5.58333E-05	0.000 %	5.79289E-09	21.8500	2.33151E-01	0.9742
89	1.35803E+01	2.87524E-04	0.000 %	4.95063E-05	0.000 %	7.36371E-09	29.9292	1.70796E-01	0.9843
94	1.43433E+01	3.74606E-04	0.000 %	3.73170E-05	0.000 %	7.18977E-09	31.3284	9.82417E-02	0.9726
99	1.51062E+01	4.77703E-04	0.001 %	2.40671E-05	0.000 %	5.73067E-09	18.2686	4.81525E-02	0.9135
104	1.58691E+01	4.33291E-04	0.000 %	1.72351E-05	0.000 %	3.84548E-09	-42.2101	3.92755E-02	0.9749
109	1.66321E+01	2.83924E-04	0.000 %	1.37998E-05	0.000 %	1.96970E-09	-53.3616	4.49326E-02	0.8911
114	1.73950E+01	1.93950E-04	0.000 %	1.43317E-05	0.000 %	1.34740E-09	-70.1708	5.36828E-02	0.8639
119	1.81580E+01	1.16429E-04	0.000 %	9.26053E-06	0.000 %	4.51521E-10	-78.8316	6.38683E-02	0.6448
124	1.89209E+01	7.24994E-05	0.000 %	1.29573E-05	0.000 %	4.85033E-10	-64.1000	1.76943E-01	0.9802
129	1.96838E+01	4.52369E-05	0.000 %	1.10481E-05	0.000 %	2.54060E-10	-11.9358	2.38057E-01	0.9501
134	2.04468E+01	2.81551E-05	0.000 %	1.16821E-05	0.000 %	1.56832E-10	-14.3889	3.79332E-01	0.8359
139	2.12097E+01	2.75319E-05	0.000 %	1.97192E-05	0.000 %	2.80434E-10	-131.7101	7.39394E-01	0.9819
144	2.19727E+01	4.84510E-05	0.000 %	2.41678E-05	0.000 %	5.38864E-10	-123.2156	4.97331E-01	0.9941
149	2.27356E+01	6.29148E-05	0.000 %	2.40768E-05	0.000 %	7.76867E-10	-114.6408	3.37334E-01	0.9953
154	2.34985E+01	8.38501E-05	0.000 %	2.97453E-05	0.000 %	1.29573E-09	-114.7885	3.33380E-01	0.9923
159	2.42615E+01	1.05873E-04	0.000 %	3.52540E-05	0.000 %	1.94467E-09	-105.6647	3.32663E-01	0.9981
164	2.50244E+01	1.06734E-04	0.000 %	2.33916E-05	0.000 %	1.29811E-09	-94.1537	2.18494E-01	0.9939
169	2.57874E+01	1.11799E-04	0.000 %	1.84170E-05	0.000 %	1.06702E-09	-154.1509	1.53691E-01	0.9874
174	2.65503E+01	1.14478E-04	0.000 %	4.19032E-05	0.000 %	2.49994E-09	-154.5293	3.55701E-01	0.9982
179	2.73132E+01	1.14714E-04	0.000 %	5.46333E-05	0.000 %	3.50541E-09	-148.3824	5.10779E-01	0.9985
184	2.80762E+01	1.26893E-04	0.000 %	8.12957E-05	0.001 %	5.37737E-09	-135.3436	6.40362E-01	0.9991
189	2.88391E+01	1.49511E-04	0.000 %	1.01995E-04	0.001 %	7.94824E-09	-131.1308	6.81800E-01	0.9989
194	2.96020E+01	1.73329E-04	0.000 %	1.36333E-04	0.001 %	1.06107E-08	-103.2853	6.77224E-01	0.7415

* 199*	3.03656E+01*	1.69890E-04	0.000 % *	1.45654E-04	0.002 % *	1.29030E-08	-123.5092	8.57208E-01	0.9997 *
* 204*	3.11279E+01*	1.69764E-04	0.000 % *	1.58954E-04	0.002 % *	1.40713E-08	-118.2181	9.36252E-01	0.9998 *
* 209*	3.18909E+01*	1.61680E-04	0.000 % *	1.55912E-04	0.002 % *	1.31443E-08	-110.2749	9.64207E-01	0.9998 *
* 214*	3.26537E+01*	1.59731E-04	0.000 % *	1.49993E-04	0.002 % *	1.24927E-08	-101.1009	9.38873E-01	0.9998 *
* 219*	3.34167E+01*	1.72264E-04	0.000 % *	1.37699E-04	0.002 % *	1.41570E-08	-96.9206	9.15413E-01	0.9999 *
* 224*	3.41797E+01*	1.96427E-04	0.000 % *	1.71408E-04	0.002 % *	1.75550E-08	-94.1335	8.72422E-01	0.9995 *
* 229*	3.49426E+01*	2.25573E-04	0.000 % *	1.66639E-04	0.002 % *	1.95992E-08	-91.9522	7.38578E-01	0.9995 *
* 234*	3.57055E+01*	2.48587E-04	0.000 % *	1.44130E-04	0.002 % *	1.86893E-08	-93.5143	5.79449E-01	0.9995 *
* 239*	3.64685E+01*	2.49177E-04	0.000 % *	1.18214E-04	0.001 % *	1.53543E-08	-111.3818	4.74107E-01	0.9983 *
* 244*	3.72314E+01*	2.10513E-04	0.000 % *	9.66744E-05	0.001 % *	1.06112E-08	-128.6263	4.58698E-01	0.9986 *
* 249*	3.79944E+01*	1.62759E-04	0.000 % *	9.06370E-05	0.001 % *	7.67198E-09	-153.2074	5.55328E-01	0.9944 *
* 254*	3.87573E+01*	1.10321E-04	0.000 % *	9.20133E-05	0.001 % *	5.29057E-09	-172.1534	8.33527E-01	0.9987 *
* 259*	3.95203E+01*	7.07546E-05	0.000 % *	9.50098E-05	0.001 % *	3.50205E-09	-176.6557	1.34097E+00	0.9976 *
* 264*	4.02832E+01*	4.75352E-05	0.000 % *	9.52217E-05	0.001 % *	2.36210E-09	-167.3402	2.00025E+00	0.9992 *
* 269*	4.10461E+01*	4.09783E-05	0.000 % *	1.06940E-04	0.001 % *	2.28539E-09	-149.7236	2.60710E+00	0.9990 *
* 274*	4.18091E+01*	4.14335E-05	0.000 % *	1.22862E-04	0.001 % *	2.65383E-09	-135.9968	2.96415E+00	0.9992 *
* 279*	4.25720E+01*	4.05484E-05	0.000 % *	1.24323E-04	0.001 % *	2.62861E-09	-128.5048	3.06554E+00	0.9997 *
* 284*	4.33350E+01*	3.68142E-05	0.000 % *	1.14139E-04	0.001 % *	2.19052E-09	-123.3285	3.09919E+00	0.9992 *
* 289*	4.40979E+01*	3.14866E-05	0.000 % *	9.92736E-05	0.001 % *	1.62954E-09	-116.3389	3.15168E+00	0.9992 *
* 294*	4.48608E+01*	2.80519E-05	0.000 % *	8.55586E-05	0.001 % *	1.25020E-09	-110.0057	3.05074E+00	0.9990 *
* 299*	4.56238E+01*	2.65783E-05	0.000 % *	8.82114E-05	0.001 % *	1.22240E-09	-106.9069	3.31811E+00	0.9995 *
* 304*	4.63867E+01*	2.71088E-05	0.000 % *	9.79359E-05	0.001 % *	1.38405E-09	-97.9200	3.51131E+00	0.9992 *
* 309*	4.71497E+01*	2.61792E-05	0.000 % *	9.67293E-05	0.001 % *	1.32053E-09	-90.3246	3.59457E+00	0.9998 *
* 314*	4.79126E+01*	1.85972E-05	0.000 % *	7.20847E-05	0.000 % *	6.98147E-10	-86.8514	3.87062E+00	0.9972 *
* 319*	4.86755E+01*	6.83578E-06	0.000 % *	2.83377E-05	0.000 % *	1.00355E-10	-84.0675	4.11809E+00	0.9868 *
* 324*	4.94385E+01*	1.85624E-06	0.000 % *	7.81167E-06	0.000 % *	7.13502E-12	-82.5243	3.97060E+00	0.8902 *
* 329*	5.02014E+01*	1.43924E-06	0.000 % *	4.20076E-06	0.000 % *	2.80979E-12	-70.9734	2.42927E+00	0.7417 *
* 334*	5.09644E+01*	1.52785E-06	0.000 % *	3.74182E-06	0.000 % *	2.45181E-12	-64.1526	2.01397E+00	0.6762 *
* 339*	5.17273E+01*	1.48301E-06	0.000 % *	5.09703E-06	0.000 % *	2.71034E-12	-71.8562	2.36301E+00	0.4727 *
* 344*	5.24902E+01*	1.41374E-06	0.000 % *	4.94699E-06	0.000 % *	2.16801E-12	-69.2294	2.07995E+00	0.3535 *
* 349*	5.32532E+01*	1.69638E-06	0.000 % *	8.57928E-06	0.000 % *	5.38491E-12	-39.2525	4.25442E+00	0.7077 *
* 354*	5.40161E+01*	1.86537E-06	0.000 % *	1.10022E-05	0.000 % *	5.37005E-12	-58.6026	3.51028E+00	0.3542 *
* 359*	5.47790E+01*	1.83353E-06	0.000 % *	1.00812E-05	0.000 % *	7.17925E-12	-32.0317	3.81921E+00	0.5173 *
* 364*	5.55420E+01*	1.51463E-06	0.000 % *	8.48289E-06	0.000 % *	4.71257E-12	9.6175	3.93889E+00	0.4945 *
* 369*	5.63049E+01*	2.12105E-06	0.000 % *	1.13469E-05	0.000 % *	9.57443E-12	-3.4226	4.08075E+00	0.5819 *
* 374*	5.70679E+01*	2.45386E-06	0.000 % *	1.26681E-05	0.000 % *	1.50219E-11	-5.4573	4.78360E+00	0.8586 *
* 379*	5.78308E+01*	3.64565E-06	0.000 % *	1.35152E-05	0.000 % *	2.26748E-11	-17.7233	3.27133E+00	0.7787 *
* 384*	5.85937E+01*	4.65688E-06	0.000 % *	1.44459E-05	0.000 % *	3.25173E-11	-42.1902	2.97511E+00	0.8590 *
* 389*	5.93567E+01*	4.80578E-06	0.000 % *	1.47055E-05	0.000 % *	3.46421E-11	-78.0428	2.87611E+00	0.8834 *
* 394*	6.01196E+01*	3.14804E-06	0.000 % *	1.86180E-05	0.000 % *	2.92133E-11	-111.0570	5.55245E+00	0.9135 *
* 399*	6.08826E+01*	1.93342E-06	0.000 % *	1.78070E-05	0.000 % *	1.78661E-11	-115.5315	9.15447E+00	0.9901 *
* 404*	6.16455E+01*	1.48180E-06	0.000 % *	1.87037E-05	0.000 % *	1.43167E-11	-121.8185	1.25025E+01	0.9811 *
* 409*	6.24084E+01*	1.29652E-06	0.000 % *	1.66949E-05	0.000 % *	1.09168E-11	-136.1432	1.24528E+01	0.9352 *
* 414*	6.31714E+01*	1.22870E-06	0.000 % *	1.50624E-05	0.000 % *	9.83101E-12	-151.9695	1.24864E+01	0.9123 *
* 419*	6.39343E+01*	1.15740E-06	0.000 % *	1.46397E-05	0.000 % *	8.29043E-12	-154.3555	1.16646E+01	0.8652 *
* 424*	6.46973E+01*	1.18851E-06	0.000 % *	1.37552E-05	0.000 % *	7.62854E-12	-166.9201	1.03554E+01	0.8005 *
* 429*	6.54602E+01*	8.82895E-07	0.000 % *	1.26385E-05	0.000 % *	5.02294E-12	-171.4015	1.23558E+01	0.7450 *
* 434*	6.62231E+01*	1.11562E-06	0.000 % *	1.21073E-05	0.000 % *	5.29080E-12	-177.6602	9.69179E+00	0.7975 *
* 439*	6.69861E+01*	1.36492E-06	0.000 % *	1.33583E-05	0.000 % *	8.91388E-12	-167.3846	9.17454E+00	0.8788 *
* 444*	6.77490E+01*	1.60053E-06	0.000 % *	1.46517E-05	0.000 % *	1.07451E-11	-172.3790	9.04287E+00	0.7719 *
**********	**********	0.00000E+00	0.000 % *	0.00000E+00	0.000 %	**********	**********	**********	**********
**********	**********	**********	**********	**********	**********	**********	**********	**********	**********
**********	**********	**********	0.000 %	************	0.000 %	**********	**********	**********	**********
**********	**********	**********	**********	**********	**********	**********	**********	**********	**********

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
(CASS) USER NAME................SLM
SET - .SVG COMMENTS............ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SVG_ COMMENTS............ 1004 RUNTITLE FFID=521 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 28 CHAN = 16

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APTH	INPUT AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-APTH	OUTPUT AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	2.75339E-03	0.019 %	8.35549E-02	0.013 %	5.87818E-05	62.0693	1.73968E+01	0.2926
9	1.37329E+00	8.74947E-04	0.002 %	9.43351E-03	0.000 %	1.43577E-06	128.8230	3.50366E+00	0.1115
14	2.13623E+00	4.94171E-04	0.001 %	3.07179E-03	0.000 %	9.70253E-08	227.3853	7.51833E-01	0.0150
19	2.89917E+00	3.82360E-04	0.000 %	1.51845E-03	0.000 %	1.09709E-07	22.8752	1.43513E+00	0.1309
24	3.66211E+00	2.23188E-04	0.000 %	6.59697E-04	0.000 %	3.31523E-08	94.1470	1.27615E+00	0.1864
29	4.42505E+00	9.12278E-05	0.000 %	4.50333E-04	0.000 %	9.90423E-09	306.5505	2.28191E+00	0.2137
34	5.18799E+00	6.75816E-05	0.000 %	2.49129E-04	0.000 %	4.85003E-10	257.1896	2.80486E-01	0.0042
39	5.95093E+00	7.19868E-05	0.000 %	1.80004E-04	0.000 %	3.59283E-09	38.5567	1.32941E+00	0.2827
44	6.71387E+00	5.08320E-05	0.000 %	1.25033E-04	0.000 %	1.07295E-09	136.7980	7.94343E-01	0.1045
49	7.47681E+00	4.94201E-05	0.000 %	8.59685E-05	0.000 %	7.54251E-10	-1.0251	5.92160E-01	0.1132
54	8.23975E+00	6.93920E-05	0.000 %	7.61033E-05	0.000 %	1.59302E-09	36.0923	6.23526E-01	0.3283
59	9.00269E+00	4.95510E-05	0.000 %	6.34950E-05	0.000 %	9.32802E-10	27.7753	7.28474E-01	0.3232
64	9.76562E+00	2.71107E-05	0.000 %	4.27600E-05	0.000 %	1.04599E-10	-69.3469	2.72884E-01	0.0299
69	1.05286E+01	1.18580E-04	0.000 %	3.33330E-05	0.000 %	2.25208E-10	-153.5982	3.07106E-02	0.0119
74	1.12916E+01	1.69104E-04	0.000 %	2.74822E-05	0.000 %	4.39005E-10	-276.5041	2.94370E-02	0.0328
79	1.20544E+01	1.91184E-04	0.000 %	2.09348E-05	0.000 %	5.62072E-10	-289.3046	3.47320E-02	0.1005
84	1.28174E+01	2.36350E-04	0.000 %	1.95622E-05	0.000 %	9.13214E-10	-310.9315	3.13441E-02	0.1434
89	1.35803E+01	2.87524E-04	0.000 %	1.84698E-05	0.000 %	1.56893E-09	-303.1697	3.53915E-02	0.3209
94	1.43433E+01	3.74606E-04	0.000 %	1.68889E-05	0.000 %	2.18281E-09	-300.4024	2.98261E-02	0.4377
99	1.51062E+01	4.77703E-04	0.001 %	1.69849E-05	0.000 %	2.83815E-09	-323.8448	2.38479E-02	0.4499
104	1.58691E+01	4.33291E-04	0.000 %	1.60751E-05	0.000 %	2.97989E-09	-342.5402	3.04348E-02	0.6730
109	1.66321E+01	2.89924E-04	0.000 %	1.40211E-05	0.000 %	1.73623E-09	2.6366	3.96068E-02	0.6707
114	1.73950E+01	1.93950E-04	0.000 %	1.24451E-05	0.000 %	9.78223E-10	6.9584	4.98543E-02	0.6039
119	1.81580E+01	1.16429E-04	0.000 %	9.50121E-06	0.000 %	4.62041E-10	34.4753	6.53543E-02	0.6414
124	1.89209E+01	7.24994E-05	0.000 %	8.44003E-06	0.000 %	2.20140E-10	52.6688	9.03091E-02	0.4759
129	1.96838E+01	4.52369E-05	0.000 %	7.52772E-06	0.000 %	1.49660E-10	80.5072	1.40233E-01	0.6917
134	2.04468E+01	2.81561E-05	0.000 %	1.01531E-05	0.000 %	1.31657E-10	62.9132	3.18441E-01	0.7798
139	2.12097E+01	2.75319E-05	0.000 %	1.46240E-05	0.000 %	1.99717E-10	-53.9176	5.15209E-01	0.9047
144	2.19727E+01	4.84510E-05	0.000 %	1.94883E-05	0.000 %	4.83384E-10	-48.7997	3.94837E-01	0.9636
149	2.27356E+01	6.20148E-05	0.000 %	2.21637E-05	0.000 %	7.04374E-10	-23.9299	3.31190E-01	0.9651
154	2.34985E+01	8.38501E-05	0.000 %	2.45654E-05	0.000 %	1.06315E-09	-12.3050	2.99948E-01	0.9795
159	2.42615E+01	1.05873E-04	0.000 %	2.97021E-05	0.000 %	1.63155E-09	-1.0690	2.79100E-01	0.9897
164	2.50244E+01	1.06734E-04	0.000 %	2.39914E-05	0.000 %	1.32569E-09	16.5106	2.23136E-01	0.9854
169	2.57874E+01	1.11709E-04	0.000 %	1.51214E-05	0.000 %	9.33470E-10	6.5959	1.43203E-01	0.9862
174	2.65503E+01	1.14478E-04	0.000 %	2.23955E-05	0.000 %	1.33295E-09	-9.3441	1.35029E-01	0.9938
179	2.73132E+01	1.14714E-04	0.000 %	2.53118E-05	0.000 %	1.57010E-09	5.0943	2.28783E-01	0.9947
184	2.80762E+01	1.26893E-04	0.000 %	2.72355E-05	0.000 %	1.79913E-09	15.1026	2.14249E-01	0.9964
189	2.88391E+01	1.49511E-04	0.000 %	3.56792E-05	0.000 %	2.77590E-09	16.5809	2.38117E-01	0.9956
194	2.96020E+01	1.73329E-04	0.000 %	9.25389E-05	0.000 %	7.11379E-09	7.3557	4.54036E-01	0.7232

* 199*	3.13655E+01*	1.63330E-04	0.000 %	* 4.66910E-05	0.000 %	*	4.13513E-19	34.4623	2.74720E-01	0.9992	*
* 204*	3.11270E+01*	1.63764E-04	0.000 %	* 4.31059E-05	0.000 %	*	4.34643E-19	48.8145	2.89187E-01	0.9995	*
* 209*	3.13390E+01*	1.61540E-04	0.000 %	* 4.53441E-05	0.000 %	*	3.82197E-19	64.6940	2.80351E-01	0.9995	*
* 214*	3.26533E+01*	1.53731E-04	0.000 %	* 3.96643E-05	0.000 %	*	3.30141E-19	85.1939	2.48113E-01	0.9983	*
* 219*	3.34167E+01*	1.72264E-04	0.000 %	* 3.47933E-05	0.000 %	*	3.12504E-19	105.3044	2.01928E-01	0.9995	*
* 224*	3.41797E+01*	1.96427E-04	0.000 %	* 2.99828E-05	0.000 %	*	3.06965E-19	127.7803	1.52551E-01	0.9988	*
* 229*	3.49426E+01*	2.25573E-04	0.000 %	* 2.44904E-05	0.000 %	*	2.87561E-19	155.9398	1.08364E-01	0.9962	*
* 234*	3.57055E+01*	2.48587E-04	0.000 %	* 1.94536E-05	0.000 %	*	2.52097E-19	186.3528	7.81612E-02	0.9984	*
* 239*	3.64685E+01*	2.49137E-04	0.000 %	* 1.93478E-05	0.000 %	*	2.51243E-19	217.3958	7.75792E-02	0.9984	*
* 244*	3.72314E+01*	2.10513E-04	0.000 %	* 2.19403E-05	0.000 %	*	2.40553E-19	235.6296	1.04028E-01	0.9972	*
* 249*	3.79944E+01*	1.62759E-04	0.000 %	* 2.78375E-05	0.000 %	*	2.35722E-19	254.2986	1.70625E-01	0.9952	*
* 254*	3.87573E+01*	1.10321E-04	0.000 %	* 3.01328E-05	0.000 %	*	1.73113E-19	271.3585	2.72739E-01	0.9971	*
* 259*	3.95203E+01*	7.07646E-05	0.000 %	* 2.91569E-05	0.000 %	*	1.07470E-19	290.3045	4.11513E-01	0.9975	*
* 264*	4.02832E+01*	4.75352E-05	0.000 %	* 2.53556E-05	0.000 %	*	5.27503E-10	314.6711	5.31381E-01	0.9945	*
* 269*	4.10461E+01*	4.09983E-05	0.000 %	* 2.54043E-05	0.000 %	*	5.42517E-10	341.7233	6.18888E-01	0.9976	*
* 274*	4.18091E+01*	4.14335E-05	0.000 %	* 2.53504E-05	0.000 %	*	5.47467E-10	6.8771	6.11494E-01	0.9987	*
* 279*	4.25720E+01*	4.05484E-05	0.000 %	* 2.41215E-05	0.000 %	*	5.09639E-10	23.3159	5.94353E-01	0.9982	*
* 284*	4.33350E+01*	3.68142E-05	0.000 %	* 2.10228E-05	0.000 %	*	4.03185E-10	40.7636	5.70432E-01	0.9978	*
* 289*	4.40979E+01*	3.14866E-05	0.000 %	* 1.74998E-05	0.000 %	*	2.87133E-10	65.0198	5.55343E-01	0.9984	*
* 294*	4.48608E+01*	2.80319E-05	0.000 %	* 1.41897E-05	0.000 %	*	2.06897E-10	85.4777	5.34870E-01	0.9948	*
* 299*	4.56238E+01*	2.65783E-05	0.000 %	* 1.12158E-05	0.000 %	*	1.54713E-10	115.0375	4.19970E-01	0.9904	*
* 304*	4.63867E+01*	2.71088E-05	0.000 %	* 8.46657E-06	0.000 %	*	1.19109E-10	140.1079	3.10779E-01	0.9902	*
* 309*	4.71497E+01*	2.61792E-05	0.000 %	* 6.16277E-06	0.000 %	*	8.29834E-11	165.7289	2.32171E-01	0.9727	*
* 314*	4.79126E+01*	1.85972E-05	0.000 %	* 2.77465E-06	0.000 %	*	2.57984E-11	201.4798	1.43030E-01	0.9190	*
* 319*	4.86755E+01*	6.83578E-06	0.000 %	* 1.40498E-06	0.000 %	*	2.40485E-12	214.8834	9.86827E-02	0.2305	*
* 324*	4.94385E+01*	1.85624E-06	0.000 %	* 8.55994E-07	0.000 %	*	1.90921E-13	169.1889	1.06247E-01	0.0531	*
* 329*	5.02014E+01*	1.48724E-06	0.000 %	* 1.14241E-06	0.000 %	*	5.38584E-13	112.8592	4.55646E-01	0.3685	*
* 334*	5.09644E+01*	1.52785E-06	0.000 %	* 9.97703E-07	0.000 %	*	2.49599E-13	248.4171	2.05026E-01	0.0986	*
* 339*	5.17273E+01*	1.48301E-06	0.000 %	* 1.40239E-06	0.000 %	*	3.23519E-13	183.2541	2.92060E-01	0.0890	*
* 344*	5.24902E+01*	1.41374E-06	0.000 %	* 1.05852E-06	0.000 %	*	1.55900E-13	266.8089	1.49568E-01	0.0399	*
* 349*	5.32532E+01*	1.69638E-06	0.000 %	* 1.22097E-06	0.000 %	*	5.12567E-13	282.1195	3.41536E-01	0.2252	*
* 354*	5.40161E+01*	1.86537E-06	0.000 %	* 1.15686E-06	0.000 %	*	4.93915E-13	318.0635	2.72176E-01	0.1926	*
* 359*	5.47790E+01*	1.39853E-06	0.000 %	* 5.88994E-07	0.000 %	*	3.91259E-13	284.6648	2.08141E-01	0.4501	*
* 364*	5.55420E+01*	1.51463E-06	0.000 %	* 7.18291E-07	0.000 %	*	4.16025E-13	230.4275	3.47725E-01	0.5376	*
* 369*	5.63049E+01*	2.12105E-06	0.000 %	* 7.58458E-07	0.000 %	*	3.61671E-13	245.1932	1.54149E-01	0.1810	*
* 374*	5.70679E+01*	2.45386E-06	0.000 %	* 1.52867E-06	0.000 %	*	1.93180E-12	284.2517	6.15166E-01	0.8591	*
* 379*	5.78308E+01*	3.64565E-06	0.000 %	* 1.52129E-06	0.000 %	*	2.31702E-12	300.5292	3.34280E-01	0.6417	*
* 384*	5.85937E+01*	4.65588E-06	0.000 %	* 2.34527E-06	0.000 %	*	5.41794E-12	302.3901	4.79042E-01	0.9040	*
* 389*	5.93567E+01*	4.80578E-06	0.000 %	* 1.43014E-06	0.000 %	*	2.54977E-12	252.3428	2.11691E-01	0.5060	*
* 394*	6.01196E+01*	3.14304E-06	0.000 %	* 2.08573E-06	0.000 %	*	2.39047E-12	280.9378	4.52521E-01	0.4873	*
* 399*	6.08826E+01*	1.93342E-06	0.000 %	* 1.03358E-06	0.000 %	*	5.01415E-13	251.4426	3.08498E-01	0.3330	*
* 404*	6.16455E+01*	1.48180E-06	0.000 %	* 1.00307E-06	0.000 %	*	3.40535E-13	-132.7740	2.97383E-01	0.1930	*
* 409*	6.24084E+01*	1.29652E-06	0.000 %	* 1.60320E-06	0.000 %	*	7.95132E-13	63.8821	9.07002E-01	0.5380	*
* 414*	6.31714E+01*	1.23370E-06	0.000 %	* 1.37207E-06	0.000 %	*	1.07210E-12	111.5776	1.36168E+00	0.7193	*
* 419*	6.39343E+01*	1.15740E-06	0.000 %	* 1.26581E-06	0.000 %	*	3.90076E-13	142.3200	5.48830E-01	0.2558	*
* 424*	6.46973E+01*	1.18851E-06	0.000 %	* 1.53026E-06	0.000 %	*	2.84995E-13	172.1844	3.96867E-01	0.0903	*
* 429*	6.54602E+01*	8.82895E-07	0.000 %	* 1.93889E-06	0.000 %	*	6.83341E-13	92.8803	1.58093E+00	0.5859	*
* 434*	6.62231E+01*	1.11562E-06	0.000 %	* 1.21222E-06	0.000 %	*	5.10145E-13	77.6695	7.85945E-01	0.5232	*
* 439*	6.69861E+01*	1.36492E-06	0.000 %	* 1.59685E-06	0.000 %	*	9.65291E-13	88.4397	9.93519E-01	0.7212	*
* 444*	6.77490E+01*	1.60053E-06	0.000 %	* 2.41950E-06	0.000 %	*	1.81134E-12	82.8599	1.35582E+00	0.8044	*
******************		0.00000E+00	0.000 %	* 0.00000E+00	0.000 %	******************************					

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******************************    0.000 %  ************     0.000 %  *******************************************
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SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSA USER NAME .... GLM
SET - .SVS COMMENTS............... INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE FFID=621 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 8000 ENDANALYSIS : VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 30 CHAN = 18

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM AMPLITUDE S11-APLT	% OF VAR	OUTPUT IN UNITS OF MM AMPLITUDE S22-VP8H	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	2.75339E-03	0.019 %	1.98927E-05	0.003 %	1.45190E-08	15.3948	3.57224E-03	0.2584
9	1.37329E+00	8.74047E-04	0.002 %	9.12911E-06	0.001 %	4.42095E-10	-67.8569	1.10962E-03	0.0113
14	2.13623E+00	4.94171E-04	0.001 %	9.68135E-06	0.001 %	4.20265E-10	288.7597	3.29989E-03	0.0284
19	2.89917E+00	3.82469E-04	0.000 %	6.39234E-05	0.000 %	9.98145E-11	303.2559	1.30570E-03	0.0061
24	3.66211E+00	2.23188E-04	0.000 %	6.76287E-05	0.000 %	2.44741E-10	253.8985	9.42091E-03	0.0967
29	4.42505E+00	9.12278E-05	0.000 %	1.78093E-05	0.003 %	4.00733E-10	161.4070	9.23277E-02	0.2237
34	5.18799E+00	5.75816E-05	0.000 %	2.68614E-05	0.006 %	2.66300E-10	186.8765	1.54005E-01	0.1090
39	5.95093E+00	7.19868E-05	0.000 %	5.54833E-05	0.025 %	1.07153E-09	-88.3701	3.76485E-01	0.2646
44	6.71387E+00	5.08920E-05	0.000 %	7.37926E-05	0.045 %	1.35312E-09	-25.5272	1.00177E+00	0.4773
49	7.47681E+00	4.94201E-05	0.000 %	9.74291E-05	0.078 %	2.32588E-09	-41.1332	1.32694E+00	0.8579
54	8.23975E+00	6.99920E-05	0.000 %	1.01476E-04	0.085 %	3.48695E-09	-28.8426	1.36483E+00	0.8862
59	9.00269E+00	4.95510E-05	0.000 %	6.00280E-05	0.030 %	1.42581E-09	-30.0228	1.11349E+00	0.8448
64	9.76562E+00	2.71107E-05	0.000 %	4.42169E-05	0.016 %	5.24687E-10	18.4473	1.36883E+00	0.7044
69	1.05286E+01	1.18580E-04	0.000 %	1.03897E-04	0.089 %	5.19950E-09	-13.0399	8.45400E-01	0.9310
74	1.12915E+01	1.69104E-04	0.000 %	1.56164E-04	0.227 %	1.46062E-08	-25.7199	9.79404E-01	0.9935
79	1.20544E+01	1.91184E-04	0.000 %	2.16214E-04	0.384 %	2.15055E-08	-19.2017	1.12817E+00	0.9951
84	1.28174E+01	2.36360E-04	0.000 %	2.55762E-04	0.537 %	3.14707E-08	-18.0651	1.08017E+00	0.9965
89	1.35803E+01	2.87524E-04	0.000 %	3.10599E-04	0.792 %	4.65542E-08	-17.1075	1.07979E+00	0.9991
94	1.43433E+01	3.74606E-04	0.000 %	3.93898E-04	1.274 %	7.69322E-08	-16.3936	1.05121E+00	0.9994
99	1.51062E+01	4.77703E-04	0.001 %	4.84317E-04	1.925 %	1.20644E-07	-15.1612	1.01373E+00	0.9998
104	1.58691E+01	4.33291E-04	0.000 %	4.17817E-04	1.433 %	9.44071E-08	-14.2347	9.64219E-01	0.9999
109	1.66321E+01	2.89924E-04	0.000 %	2.56765E-04	0.584 %	4.03333E-08	-14.0079	9.20078E-01	0.9999
114	1.73950E+01	1.93950E-04	0.000 %	1.51785E-04	0.215 %	1.63611E-08	-14.1654	8.33999E-01	0.9975
119	1.81580E+01	1.15429E-04	0.000 %	8.57625E-05	0.060 %	5.20301E-09	-15.9301	7.35973E-01	0.9983
124	1.89209E+01	7.24994E-05	0.000 %	4.17505E-05	0.014 %	1.56929E-09	-19.7191	5.72486E-01	0.9883
129	1.96838E+01	4.52369E-05	0.000 %	1.66029E-05	0.002 %	3.82763E-10	-45.3369	3.58653E-01	0.9549
134	2.04468E+01	2.81561E-05	0.000 %	1.77791E-05	0.003 %	2.24620E-10	-204.9978	5.43292E-01	0.7403
139	2.12097E+01	2.75319E-05	0.000 %	4.02604E-05	0.013 %	5.72442E-10	-349.4866	1.44807E+00	0.9805
144	2.19727E+01	4.84510E-05	0.000 %	5.93307E-05	0.029 %	1.49797E-09	-11.8942	1.22356E+00	0.9984
149	2.27356E+01	6.20148E-05	0.000 %	7.36253E-05	0.044 %	2.37609E-09	-17.8979	1.18468E+00	0.9957
154	2.34985E+01	8.38501E-05	0.000 %	8.87863E-05	0.065 %	3.88069E-09	-18.4159	1.05835E+00	0.9990
159	2.42615E+01	1.05873E-04	0.000 %	1.06450E-04	0.093 %	5.87539E-09	-24.5175	1.00507E+00	0.9992
164	2.50244E+01	1.06734E-04	0.000 %	1.13614E-04	0.106 %	6.32267E-09	-31.3457	1.06421E+00	0.9995
169	2.57874E+01	1.11739E-04	0.000 %	1.37482E-04	0.155 %	8.01290E-09	-34.6612	1.22924E+00	0.9992
174	2.65503E+01	1.14478E-04	0.000 %	1.58537E-04	0.206 %	9.46703E-09	-31.1515	1.38516E+00	0.9997
179	2.73132E+01	1.14714E-04	0.000 %	1.82230E-04	0.273 %	1.09002E-08	-23.5304	1.58827E+00	0.9991
184	2.80762E+01	1.26893E-04	0.000 %	1.74428E-04	0.250 %	1.15355E-08	-10.2675	1.37371E+00	0.9987
189	2.88391E+01	1.49511E-04	0.000 %	1.77460E-04	0.259 %	1.38331E-08	-16.2956	1.18660E+00	0.9994
194	2.96020E+01	1.73329E-04	0.000 %	1.92485E-04	0.304 %	1.68005E-08	-16.2757	1.07230E+00	0.9323

199	3.03650E+01	1.69390E-04	0.000 %	2.32726E-04	0.445 %	2.06186E-08	-23.4818	1.36979E+00	0.9999
204	3.11279E+01	1.69764E-04	0.000 %	2.51351E-04	0.519 %	2.22529E-08	-21.9109	1.48055E+00	1.0000
209	3.18907E+01	1.61680E-04	0.000 %	2.53863E-04	0.529 %	2.14051E-08	-19.7943	1.57012E+00	1.0000
214	3.26538E+01	1.59731E-04	0.000 %	2.59287E-04	0.552 %	2.15990E-08	-17.2618	1.52324E+00	1.0000
219	3.34167E+01	1.72264E-04	0.000 %	2.85824E-04	0.671 %	2.56775E-08	-14.2592	1.55918E+00	1.0000
224	3.41797E+01	1.96427E-04	0.000 %	3.25114E-04	0.868 %	3.33047E-08	-11.4204	1.65513E+00	1.0000
229	3.49426E+01	2.25573E-04	0.000 %	3.79574E-04	1.183 %	4.46532E-08	-9.9289	1.68271E+00	1.0000
234	3.57056E+01	2.48687E-04	0.000 %	4.27971E-04	1.503 %	5.55047E-08	-6.6487	1.72089E+00	1.0000
239	3.64685E+01	2.49137E-04	0.000 %	4.31134E-04	1.525 %	5.60374E-08	-3.2394	1.73031E+00	1.0000
244	3.72314E+01	2.10613E-04	0.000 %	3.65140E-04	1.094 %	4.01061E-08	-0.5049	1.73369E+00	1.0000
249	3.79944E+01	1.62759E-04	0.000 %	2.80753E-04	0.647 %	2.38295E-08	2.9347	1.72488E+00	0.9999
254	3.87573E+01	1.10321E-04	0.000 %	1.86254E-04	0.285 %	1.07157E-08	6.6769	1.68825E+00	0.9999
259	3.95203E+01	7.07646E-05	0.000 %	1.14032E-04	0.107 %	4.20797E-09	9.9623	1.61128E+00	0.9998
264	4.02832E+01	4.75852E-05	0.000 %	7.09857E-05	0.041 %	1.76137E-09	10.1189	1.49155E+00	0.9997
269	4.10461E+01	4.09983E-05	0.000 %	5.99595E-05	0.029 %	1.26031E-09	7.1620	1.43773E+00	0.9995
274	4.18091E+01	4.14335E-05	0.000 %	5.92455E-05	0.029 %	1.27992E-09	4.5224	1.42958E+00	0.9995
279	4.25720E+01	4.05484E-05	0.000 %	5.80958E-05	0.028 %	1.22845E-09	4.3905	1.43265E+00	0.9999
284	4.33350E+01	3.68142E-05	0.000 %	5.28701E-05	0.023 %	1.01489E-09	2.5338	1.43589E+00	0.9997
289	4.40979E+01	3.14866E-05	0.000 %	4.56299E-05	0.017 %	7.48943E-10	0.3179	1.44854E+00	0.9991
294	4.48604E+01	2.80319E-05	0.000 %	4.15304E-05	0.014 %	5.06993E-10	-0.9632	1.48119E+00	0.9995
299	4.56238E+01	2.65783E-05	0.000 %	4.06477E-05	0.014 %	5.63375E-10	-1.9527	1.52924E+00	0.9998
304	4.63867E+01	2.71088E-05	0.000 %	4.27968E-05	0.015 %	6.04950E-10	-0.0163	1.57844E+00	0.9997
309	4.71497E+01	2.61792E-05	0.000 %	4.08317E-05	0.014 %	5.57204E-10	1.7889	1.55895E+00	0.9990
314	4.79126E+01	1.85972E-05	0.000 %	2.93329E-05	0.007 %	2.84281E-10	1.2117	1.57609E+00	0.9985
319	4.86755E+01	6.83578E-06	0.000 %	1.10599E-05	0.001 %	3.92829E-11	1.2081	1.51197E+00	0.9926
324	4.94385E+01	1.85624E-06	0.000 %	2.94391E-06	0.000 %	2.75021E-12	-4.5521	1.53048E+00	0.9313
329	5.02014E+01	1.48924E-06	0.000 %	1.92692E-06	0.000 %	1.40040E-12	16.6583	1.21075E+00	0.8756
334	5.09644E+01	1.52785E-06	0.000 %	1.71451E-06	0.000 %	1.26693E-12	24.1536	1.04072E+00	0.8601
339	5.17273E+01	1.48301E-06	0.000 %	9.80346E-07	0.000 %	5.99426E-13	-10.1726	5.22610E-01	0.6250
344	5.24902E+01	1.41374E-06	0.000 %	1.18256E-06	0.000 %	7.02571E-13	-36.5607	5.74036E-01	0.6493
349	5.32532E+01	1.69638E-06	0.000 %	1.04956E-06	0.000 %	8.56913E-13	-55.9765	5.70982E-01	0.8517
354	5.40161E+01	1.86537E-06	0.000 %	1.30505E-06	0.000 %	1.14083E-12	-42.8379	5.28667E-01	0.8075
359	5.47790E+01	1.89453E-06	0.000 %	1.62603E-06	0.000 %	1.33465E-12	-63.3002	7.10013E-01	0.6872
364	5.55420E+01	1.51463E-06	0.000 %	1.51912E-06	0.000 %	1.08774E-12	-85.2297	9.09159E-01	0.8217
369	5.63049E+01	2.12105E-06	0.000 %	2.46988E-06	0.000 %	2.34159E-12	-100.9656	9.98010E-01	0.7346
374	5.70679E+01	2.45386E-06	0.000 %	4.05965E-06	0.000 %	4.84552E-12	-129.7459	1.54301E+00	0.8699
379	5.78308E+01	3.64565E-06	0.000 %	7.73029E-06	0.000 %	1.42799E-11	-143.3370	2.06017E+00	0.9440
384	5.85937E+01	4.65588E-06	0.000 %	1.33316E-05	0.001 %	3.17499E-11	-153.4531	2.30725E+00	0.9615
389	5.93567E+01	4.80578E-06	0.000 %	1.80422E-05	0.003 %	4.45583E-11	-167.4205	3.59944E+00	0.9710
394	6.01196E+01	3.14804E-06	0.000 %	1.69318E-05	0.002 %	2.67597E-11	-167.7551	5.17761E+00	0.9267
399	6.08826E+01	1.93342E-06	0.000 %	1.19210E-05	0.001 %	1.15747E-11	-184.1225	5.93728E+00	0.9273
404	6.16455E+01	1.48180E-06	0.000 %	1.21671E-05	0.001 %	8.40337E-12	-185.5868	7.33849E+00	0.7988
409	6.24084E+01	1.29652E-06	0.000 %	1.04778E-05	0.001 %	6.67884E-12	-214.5090	7.51851E+00	0.8887
414	6.31714E+01	1.22870E-06	0.000 %	9.50087E-06	0.001 %	5.83862E-12	-227.1483	7.41567E+00	0.9197
419	6.39343E+01	1.15740E-06	0.000 %	8.99411E-06	0.001 %	5.13943E-12	-232.6233	7.23107E+00	0.8809
424	6.46973E+01	1.18851E-06	0.000 %	9.04838E-06	0.001 %	5.14310E-12	-242.6831	5.98155E+00	0.8409
429	6.54602E+01	8.82895E-07	0.000 %	8.53653E-06	0.001 %	3.57773E-12	-247.5842	8.80075E+00	0.8285
434	6.62231E+01	1.11562E-06	0.000 %	9.14925E-06	0.001 %	4.90319E-12	-250.4975	7.55401E+00	0.8484
439	6.69861E+01	1.36492E-06	0.000 %	9.81308E-06	0.001 %	6.49332E-12	-239.3324	6.68320E+00	0.8641
444	6.77490E+01	1.69053E-06	0.000 %	1.08374E-05	0.001 %	8.19132E-12	-246.8895	6.13134E+00	0.8200
*****	*****	0.00000E+00	0.000 %	0.00000E+00	0.000 %	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
*****	*****	*****	0.000 %	*****	0.000 %	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASS# USER NAME................ LM
SET - .SVS COMMENTS............ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............ 1004 RUNTITLE EFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SERNO = 29 CHAN = 17

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF NEWTONS AMPLITUDE G11-INF4	% OF VAR	OUTPUT IN UNITS OF MM AMPLITUDE G22-APIT	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	3.33302E+00	0.000 %	4.06367E-03	0.409 %	1.47012E-03	-250.1424	2.53750E-04	0.0433
9	1.37329E+00	1.94845E+01	0.001 %	2.13357E-03	0.113 %	1.09219E-02	-309.8376	5.51633E-05	0.2538
14	2.13623E+00	8.33417E+01	0.011 %	6.45174E-04	0.010 %	5.09713E-03	-110.1261	1.58319E-06	0.0473
19	2.89917E+00	1.29155E+02	0.027 %	4.98571E-04	0.006 %	1.64389E-02	47.5799	1.88963E-06	0.2495
24	3.66211E+00	1.69338E+02	0.047 %	3.59033E-04	0.003 %	5.22924E-03	-340.6653	3.48433E-07	0.0271
29	4.42505E+00	1.98982E+02	0.065 %	2.02051E-04	0.001 %	8.45495E-03	-238.8900	4.09464E-07	0.1625
34	5.18799E+00	2.30587E+02	0.087 %	1.47167E-04	0.001 %	1.17873E-02	-109.8304	4.24715E-07	0.4432
39	5.95093E+00	2.66574E+02	0.116 %	6.20965E-05	0.000 %	5.28309E-03	-166.4798	1.42555E-07	0.3745
44	6.71387E+00	3.11458E+02	0.159 %	8.73243E-05	0.000 %	8.19366E-03	-165.3594	1.51960E-07	0.3337
49	7.47681E+00	3.51979E+02	0.203 %	6.87330E-05	0.000 %	5.35174E-03	-140.4017	8.28306E-08	0.1799
54	8.23975E+00	3.74027E+02	0.229 %	6.12378E-05	0.000 %	4.92819E-03	-196.1162	6.75478E-08	0.1702
59	9.00269E+00	4.14443E+02	0.281 %	1.42557E-04	0.001 %	2.76935E-02	-201.2215	3.09158E-07	0.8075
64	9.76562E+00	4.57464E+02	0.342 %	2.31155E-04	0.002 %	5.67379E-02	-146.1412	5.19863E-07	0.8966
69	1.05286E+01	4.81056E+02	0.379 %	3.34922E-04	0.003 %	7.32884E-02	-75.1727	6.07260E-07	0.7608
74	1.12915E+01	5.31722E+02	0.463 %	2.20041E-04	0.001 %	5.60365E-02	-20.3485	3.80042E-07	0.8434
79	1.20544E+01	5.10019E+02	0.426 %	1.03419E-04	0.000 %	2.44051E-02	-21.3355	1.79903E-07	0.7871
84	1.28174E+01	4.77379E+02	0.374 %	6.07095E-05	0.000 %	1.27415E-02	-23.1005	1.06984E-07	0.7092
89	1.35803E+01	4.45576E+02	0.325 %	5.34320E-05	0.000 %	1.02975E-02	12.3636	9.94084E-08	0.6875
94	1.43433E+01	4.65119E+02	0.354 %	1.99962E-05	0.000 %	2.25663E-03	168.7103	2.00016E-08	0.2165
99	1.51062E+01	4.55794E+02	0.340 %	4.50676E-05	0.000 %	1.07856E-02	267.7456	9.95486E-08	0.9701
104	1.58691E+01	5.08953E+02	0.424 %	6.31754E-05	0.000 %	1.65594E-02	302.3121	1.22580E-07	0.9752
109	1.66321E+01	5.25732E+02	0.454 %	5.32195E-05	0.000 %	1.44323E-02	325.6398	9.97476E-08	0.9745
114	1.73950E+01	4.93115E+02	0.406 %	4.14411E-05	0.000 %	1.05550E-02	341.7320	8.15700E-08	0.9613
119	1.81580E+01	4.64108E+02	0.352 %	3.34069E-05	0.000 %	7.95403E-03	357.2754	7.08073E-08	0.9677
124	1.89209E+01	4.62417E+02	0.350 %	2.70296E-05	0.000 %	5.23159E-03	355.9200	5.58808E-08	0.9139
129	1.96838E+01	4.79948E+02	0.377 %	2.89000E-05	0.000 %	7.08869E-03	354.7648	5.90076E-08	0.9603
134	2.04468E+01	5.09420E+02	0.425 %	4.34313E-05	0.000 %	1.11305E-02	35.2315	8.22421E-08	0.9305
139	2.12097E+01	5.39236E+02	0.476 %	1.27061E-05	0.000 %	2.97093E-03	81.8546	1.35913E-08	0.5913
144	2.19727E+01	5.77501E+02	0.546 %	1.00207E-05	0.000 %	2.43364E-03	182.4709	1.39921E-08	0.6502
149	2.27356E+01	5.94367E+02	0.578 %	1.55321E-05	0.000 %	4.61783E-03	227.9351	2.50645E-08	0.9200
154	2.34985E+01	6.31613E+02	0.653 %	2.10287E-05	0.000 %	5.64783E-03	214.8402	3.19529E-08	0.9211
159	2.42615E+01	6.55305E+02	0.703 %	3.60159E-05	0.000 %	1.21745E-02	200.7437	5.43623E-08	0.9784
164	2.50244E+01	6.04748E+02	0.598 %	6.58814E-05	0.000 %	2.10382E-02	201.7181	1.10303E-07	0.9948
169	2.57874E+01	6.25334E+02	0.643 %	1.15591E-04	0.000 %	3.77099E-02	212.6596	1.34025E-07	0.9959
174	2.65503E+01	6.40920E+02	0.672 %	1.68543E-04	0.001 %	5.62639E-02	227.5615	2.52535E-07	0.9974
179	2.73132E+01	6.49194E+02	0.690 %	2.44894E-04	0.001 %	8.28075E-02	243.7655	3.75748E-07	0.9975
184	2.80762E+01	6.25962E+02	0.641 %	2.77009E-04	0.002 %	9.02869E-02	288.5875	4.41833E-07	0.9968
189	2.88391E+01	6.15486E+02	0.620 %	2.15032E-04	0.001 %	6.89005E-02	324.3172	3.48751E-07	0.9965
194	2.96020E+01	5.91918E+02	0.573 %	1.27861E-04	0.000 %	3.75039E-02	341.8053	2.05245E-07	0.9028

* 199*	3.33650E+01*	5.74735E+02	0.540 % *	7.33421E-05	0.000 % *	2.19193E-02	359.0685	1.27242E-07	0.9942 *
* 204*	3.11279E+01*	5.28960E+02	0.458 % *	3.36723E-05	0.000 % *	9.20461E-03	339.7863	5.30796E-08	0.9819 *
* 209*	3.18909E+01*	4.58316E+02	0.344 % *	3.48933E-05	0.000 % *	8.24919E-03	297.4301	7.51389E-09	0.9762 *
* 214*	3.26539E+01*	4.03798E+02	0.267 % *	4.89971E-05	0.000 % *	1.03063E-02	283.9219	1.21201E-07	0.9977 *
* 219*	3.34167E+01*	3.76820E+02	0.232 % *	5.86929E-05	0.000 % *	1.15193E-02	290.7717	1.55565E-07	0.9975 *
* 224*	3.41797E+01*	3.63781E+02	0.217 % *	7.38760E-05	0.000 % *	1.40090E-02	298.8251	2.02981E-07	0.9990 *
* 229*	3.49426E+01*	3.52154E+02	0.203 % *	8.32353E-05	0.000 % *	1.52792E-02	311.3759	2.36247E-07	0.9990 *
* 234*	3.57055E+01*	3.25590E+02	0.174 % *	9.02092E-05	0.000 % *	1.53141E-02	323.4607	2.75830E-07	0.9989 *
* 239*	3.64685E+01*	3.04597E+02	0.152 % *	9.43841E-05	0.000 % *	1.49910E-02	342.1416	3.09616E-07	0.9990 *
* 244*	3.72314E+01*	2.99079E+02	0.146 % *	8.78948E-05	0.000 % *	1.37064E-02	3.2874	2.93820E-07	0.9996 *
* 249*	3.79944E+01*	3.15921E+02	0.163 % *	7.55417E-05	0.000 % *	1.26012E-02	22.5057	2.42095E-07	0.9985 *
* 254*	3.87573E+01*	3.26239E+02	0.174 % *	6.26323E-05	0.000 % *	1.06495E-02	36.0793	1.91863E-07	0.9987 *
* 259*	3.95203E+01*	3.32782E+02	0.181 % *	5.18930E-05	0.000 % *	8.99673E-03	44.6117	1.55774E-07	0.9979 *
* 264*	4.02832E+01*	3.21818E+02	0.169 % *	4.16555E-05	0.000 % *	6.98485E-03	52.1330	1.29320E-07	0.9982 *
* 269*	4.10461E+01*	3.38897E+02	0.188 % *	3.55327E-05	0.000 % *	6.45413E-03	53.2094	1.07753E-07	0.9992 *
* 274*	4.18091E+01*	3.62596E+02	0.215 % *	3.33700E-05	0.000 % *	6.30795E-03	56.2886	9.19970E-08	0.9993 *
* 279*	4.25720E+01*	3.65430E+02	0.218 % *	3.06629E-05	0.000 % *	5.83892E-03	59.9565	8.38402E-08	0.9984 *
* 284*	4.33350E+01*	3.55307E+02	0.207 % *	2.71157E-05	0.000 % *	5.01920E-03	64.6790	7.62355E-08	0.9979 *
* 289*	4.40979E+01*	3.26165E+02	0.174 % *	2.31661E-05	0.000 % *	3.93533E-03	67.3613	7.09312E-08	0.9973 *
* 294*	4.48608E+01*	2.98273E+02	0.146 % *	1.97464E-05	0.000 % *	3.06940E-03	67.7897	6.61537E-08	0.9985 *
* 299*	4.56238E+01*	2.95869E+02	0.143 % *	1.81961E-05	0.000 % *	2.80260E-03	69.4620	6.13892E-08	0.9964 *
* 304*	4.63867E+01*	3.20349E+02	0.168 % *	1.77480E-05	0.000 % *	2.95980E-03	62.7781	5.53026E-08	0.9964 *
* 309*	4.71497E+01*	3.21148E+02	0.169 % *	1.74423E-05	0.000 % *	2.91833E-03	58.7194	5.42567E-08	0.9980 *
* 314*	4.79126E+01*	2.39298E+02	0.094 % *	1.30012E-05	0.000 % *	1.61479E-03	52.8190	5.40712E-08	0.9905 *
* 319*	4.86755E+01*	9.19773E+01	0.014 % *	5.09204E-06	0.000 % *	2.41507E-04	46.3750	5.47392E-08	0.9776 *
* 324*	4.94385E+01*	2.40540E+01	0.001 % *	1.42197E-06	0.000 % *	1.58033E-05	49.0390	5.23742E-08	0.7849 *
* 329*	5.02014E+01*	1.69897E+01	0.000 % *	1.57711E-06	0.000 % *	1.36541E-05	94.6905	9.07027E-09	0.8443 *
* 334*	5.09644E+01*	1.60171E+01	0.000 % *	1.32969E-06	0.000 % *	1.01442E-05	106.0771	7.58199E-08	0.8341 *
* 339*	5.17273E+01*	1.48900E+01	0.000 % *	1.19292E-06	0.000 % *	8.12929E-06	142.8932	7.03064E-08	0.7701 *
* 344*	5.24902E+01*	1.51883E+01	0.000 % *	8.44581E-07	0.000 % *	5.90432E-06	179.9875	4.90772E-08	0.7789 *
* 349*	5.32532E+01*	1.71359E+01	0.000 % *	7.77501E-07	0.000 % *	3.07804E-07	186.8139	3.31599E-09	0.0053 *
* 354*	5.40161E+01*	2.27564E+01	0.001 % *	1.44522E-06	0.000 % *	3.77825E-05	-130.7073	3.25037E-08	0.2619 *
* 359*	5.47790E+01*	2.38350E+01	0.001 % *	1.41723E-06	0.000 % *	5.02273E-06	5.4003	1.69527E-08	0.0813 *
* 364*	5.55420E+01*	1.73174E+01	0.000 % *	1.55642E-06	0.000 % *	1.10704E-05	30.4422	7.07825E-08	0.5475 *
* 369*	5.63049E+01*	2.36593E+01	0.001 % *	2.82731E-06	0.000 % *	2.06777E-05	8.6619	7.08320E-08	0.3513 *
* 374*	5.70679E+01*	2.33013E+01	0.001 % *	3.87432E-06	0.000 % *	4.05530E-05	27.4550	1.43217E-07	0.7417 *
* 379*	5.78308E+01*	2.97601E+01	0.001 % *	4.48280E-06	0.000 % *	5.84979E-05	49.7137	1.26649E-07	0.7069 *
* 384*	5.85937E+01*	3.45602E+01	0.002 % *	5.08032E-06	0.000 % *	7.62413E-05	62.5588	1.22395E-07	0.6933 *
* 389*	5.93567E+01*	3.76406E+01	0.002 % *	4.50837E-06	0.000 % *	8.40447E-05	70.7156	1.13744E-07	0.8631 *
* 394*	6.01196E+01*	4.84170E+01	0.004 % *	4.18850E-06	0.000 % *	8.06631E-05	77.3271	6.59795E-08	0.5817 *
* 399*	6.08826E+01*	3.84496E+01	0.002 % *	3.55498E-06	0.000 % *	5.42757E-05	54.9895	8.33670E-08	0.7691 *
* 404*	6.16455E+01*	5.04666E+01	0.004 % *	3.97394E-06	0.000 % *	8.15961E-05	48.3035	6.14315E-08	0.6086 *
* 409*	6.24084E+01*	4.71486E+01	0.004 % *	4.91742E-06	0.000 % *	1.13105E-04	53.2012	9.75605E-08	0.8750 *
* 414*	6.31714E+01*	4.67868E+01	0.004 % *	4.55434E-06	0.000 % *	1.07125E-04	49.2671	9.38355E-08	0.9293 *
* 419*	6.39343E+01*	4.54306E+01	0.003 % *	4.96884E-06	0.000 % *	1.09507E-04	40.4874	1.01827E-07	0.8669 *
* 424*	6.46973E+01*	4.83526E+01	0.004 % *	4.78131E-06	0.000 % *	1.10983E-04	49.3087	9.09849E-08	0.8470 *
* 429*	6.54602E+01*	4.74633E+01	0.004 % *	4.43043E-06	0.000 % *	1.01179E-04	43.2810	8.61205E-08	0.8512 *
* 434*	6.62231E+01*	5.32256E+01	0.005 % *	5.56971E-06	0.000 % *	1.39984E-04	48.8509	9.47474E-08	0.8198 *
* 439*	6.69861E+01*	6.07947E+01	0.006 % *	6.54386E-06	0.000 % *	1.98270E-04	42.9033	1.02862E-07	0.9132 *
* 444*	6.77490E+01*	7.38953E+01	0.009 % *	7.33287E-06	0.000 % *	2.76863E-04	48.6351	9.72231E-08	0.8413 *
******************		0.00000E+00	0.000 % *	0.00000E+00	0.000 %	**************************************			
***									
******************************			0.000 % ************		0.000 %	**************************************			
***									

SET TITLE....................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
JCASSY USER NAME.................FLM
SET - .SVJ COMMENTS............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNG_ COMMENTS............. 1004 RUNTITLE FFID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 3 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 24 CHAN = 12

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM AMPLITUDE G11-APIT	% OF VAR	OUTPUT IN UNITS OF MM AMPLITUDE G22-VPBT	% OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	4.06367E-03	0.409	1.42744E-05	0.003	1.33284E-08	-81.9229	1.54765E-03	0.1941
9	1.37329E+00	2.13357E-03	0.113	4.98597E-06	0.000	1.46956E-09	-56.2857	6.19018E-04	0.0702
14	2.13623E+00	6.45174E-04	0.010	1.17010E-05	0.002	2.94695E-10	-251.6221	1.35753E-03	0.0056
19	2.89917E+00	4.88571E-04	0.006	2.01998E-05	0.006	3.03758E-09	2.7345	2.44006E-02	0.3485
24	3.66211E+00	3.59033E-04	0.003	3.46341E-05	0.018	7.45193E-10	-7.4617	1.10849E-02	0.0132
29	4.42505E+00	2.02051E-04	0.001	5.72352E-05	0.049	2.56880E-09	322.3691	1.20653E-01	0.1814
34	5.18799E+00	1.47167E-04	0.001	2.79505E-05	0.012	9.07524E-10	-55.9788	8.03468E-02	0.1790
39	5.95093E+00	6.20965E-05	0.000	5.01465E-05	0.037	9.55140E-10	-69.7079	4.74966E-01	0.3459
44	6.71387E+00	8.73243E-05	0.000	8.29453E-05	0.102	2.04449E-09	-73.6525	5.14096E-01	0.2929
49	7.47681E+00	6.87330E-05	0.000	6.55860E-05	0.064	1.04190E-09	-62.2455	4.22887E-01	0.1964
54	8.23975E+00	5.12378E-05	0.000	7.57949E-05	0.085	1.90453E-09	-40.5747	9.73819E-01	0.6190
59	9.00269E+00	1.42557E-04	0.001	1.61625E-04	0.387	1.18181E-08	-25.3991	1.11505E+00	0.9673
64	9.76562E+00	2.51156E-04	0.002	2.35519E-04	0.822	3.06370E-08	-33.5619	9.31302E-01	0.9863
69	1.05286E+01	3.34922E-04	0.003	2.03797E-04	0.615	3.49579E-08	-38.1062	5.97567E-01	0.9644
74	1.12915E+01	2.20041E-04	0.001	7.94367E-05	0.093	8.32104E-09	-24.6780	3.29535E-01	0.8332
79	1.20544E+01	1.03419E-04	0.000	4.01474E-05	0.024	1.20809E-09	-98.0774	2.16586E-01	0.3113
84	1.28174E+01	6.07095E-05	0.000	3.55849E-05	0.020	5.71313E-10	-140.0043	2.97229E-01	0.2433
89	1.35803E+01	5.34320E-05	0.000	3.68986E-05	0.020	5.44654E-10	-274.3352	4.32966E-01	0.3931
94	1.43433E+01	1.99962E-05	0.000	5.21756E-05	0.040	3.33460E-10	-9.4246	1.59911E+00	0.3756
99	1.51062E+01	4.60676E-05	0.000	6.46137E-05	0.062	1.47088E-09	-138.7882	1.32897E+00	0.8978
104	1.58691E+01	5.31754E-05	0.000	1.05234E-04	0.164	3.39425E-09	-157.9378	1.53071E+00	0.9584
109	1.66321E+01	5.32195E-05	0.000	1.19980E-04	0.213	3.26114E-09	-166.7624	2.20780E+00	0.9590
114	1.73950E+01	4.14411E-05	0.000	1.15138E-04	0.195	2.44587E-09	-171.3463	2.73087E+00	0.9661
119	1.81580E+01	3.34069E-05	0.000	9.77809E-05	0.142	1.67420E-09	-180.0390	2.87650E+00	0.9658
124	1.89209E+01	2.70296E-05	0.000	9.05511E-05	0.121	1.20215E-09	-180.4181	3.15505E+00	0.8870
129	1.96838E+01	2.89000E-05	0.000	1.00829E-04	0.151	1.48195E-09	-181.3743	3.40228E+00	0.9510
134	2.04468E+01	4.34313E-05	0.000	1.27019E-04	0.239	2.80319E-09	-212.9598	2.84955E+00	0.9493
139	2.12097E+01	1.27361E-05	0.000	1.13692E-04	0.191	5.40367E-10	-263.3189	7.50562E+00	0.7225
144	2.19727E+01	1.00207E-05	0.000	1.35913E-04	0.273	5.82863E-10	-6.8398	1.11303E+01	0.6744
149	2.27356E+01	1.55321E-05	0.000	1.52833E-04	0.346	1.19273E-09	-50.1465	9.48012E+00	0.9282
154	2.34985E+01	2.10287E-05	0.000	1.63885E-04	0.398	1.73675E-09	-40.6807	7.33085E+00	0.9338
159	2.42615E+01	3.60159E-05	0.000	2.08738E-04	0.645	3.89473E-09	-28.3119	5.75731E+00	0.9868
164	2.50244E+01	6.68814E-05	0.000	2.49344E-04	0.921	8.68757E-09	-22.9142	3.72407E+00	0.9978
169	2.57874E+01	1.15571E-04	0.000	3.19623E-04	1.513	1.92567E-08	-23.9537	2.76353E+00	0.9989
174	2.65503E+01	1.68543E-04	0.001	3.37333E-04	2.222	3.40345E-08	-23.3686	2.29733E+00	0.9993
179	2.73132E+01	2.44894E-04	0.001	4.59930E-04	3.133	5.87335E-08	-23.4428	1.87785E+00	0.9997
184	2.80762E+01	2.77009E-04	0.002	4.07312E-04	2.457	5.88164E-08	-24.6517	1.46974E+00	0.9991
189	2.88391E+01	2.15032E-04	0.001	2.33078E-04	0.805	2.61153E-08	-28.0634	1.08298E+00	0.9983
194	2.96020E+01	1.27861E-04	0.000	9.73999E-05	0.141	5.95811E-09	-45.3534	6.98810E-01	0.8416

199	3.03550E+01	7.33421E-05	0.000 %	4.51357E-05	0.030 %	1.67593E-09	-127.3592	5.74436E-01	0.9424
204	3.11279E+01	3.36723E-05	0.000 %	8.88243E-05	0.117 %	1.53327E-09	-125.0802	2.59301E+00	0.9663
209	3.18909E+01	3.48933E-05	0.000 %	1.10212E-04	0.180 %	1.98635E-09	-76.4725	3.12827E+00	0.9809
214	3.26538E+01	4.89971E-05	0.000 %	1.19374E-04	0.211 %	3.04621E-09	-54.7797	2.43307E+00	0.9975
219	3.34167E+01	5.85929E-05	0.000 %	1.21140E-04	0.217 %	3.70484E-09	-51.5227	2.06219E+00	0.9983
224	3.41797E+01	7.38760E-05	0.000 %	1.30666E-04	0.253 %	5.03143E-09	-48.9794	1.76774E+00	0.9989
229	3.49425E+01	8.32353E-05	0.000 %	1.36436E-04	0.276 %	5.91918E-09	-51.4523	1.53824E+00	0.9989
234	3.57055E+01	9.02992E-05	0.000 %	1.32833E-04	0.261 %	5.24517E-09	-51.5803	1.47178E+00	0.9990
239	3.64685E+01	9.43841E-05	0.000 %	1.17160E-04	0.203 %	5.76467E-09	-55.9750	1.24082E+00	0.9992
244	3.72314E+01	8.78948E-05	0.000 %	9.56513E-05	0.135 %	4.38283E-09	-68.5959	1.08784E+00	0.9992
249	3.79944E+01	7.65417E-05	0.000 %	8.57168E-05	0.109 %	3.41905E-09	-84.1842	1.11903E+00	0.9985
254	3.87573E+01	6.26323E-05	0.000 %	8.03160E-05	0.096 %	2.62113E-09	-94.9763	1.28121E+00	0.9982
259	3.95203E+01	5.18930E-05	0.000 %	7.36649E-05	0.085 %	2.04447E-09	-100.2587	1.45577E+00	0.9968
264	4.02832E+01	4.16555E-05	0.000 %	6.58274E-05	0.066 %	1.45007E-09	-104.7955	1.50243E+00	0.9977
269	4.10461E+01	3.65327E-05	0.000 %	6.25358E-05	0.058 %	1.19111E-09	-102.5624	1.71124E+00	0.9994
274	4.18091E+01	3.33700E-05	0.000 %	5.99060E-05	0.053 %	1.04230E-09	-102.4176	1.79477E+00	0.9995
279	4.25720E+01	3.06629E-05	0.000 %	5.07492E-05	0.038 %	8.10998E-10	-106.8695	1.55395E+00	0.9987
284	4.33350E+01	2.71157E-05	0.000 %	4.42088E-05	0.029 %	6.24198E-10	-116.0360	1.62784E+00	0.9969
289	4.40979E+01	2.31661E-05	0.000 %	3.84418E-05	0.022 %	4.63264E-10	-123.0785	1.55521E+00	0.9950
294	4.48604E+01	1.97464E-05	0.000 %	3.28261E-05	0.016 %	3.37902E-10	-125.7610	1.56168E+00	0.9991
299	4.56231E+01	1.81961E-05	0.000 %	2.92178E-05	0.013 %	2.76880E-10	-131.0252	1.50348E+00	0.9972
304	4.63867E+01	1.77480E-05	0.000 %	2.85145E-05	0.012 %	2.62930E-10	-133.3172	1.50056E+00	0.9924
309	4.71497E+01	1.74423E-05	0.000 %	2.66314E-05	0.011 %	2.41401E-10	-141.3165	1.52146E+00	0.9930
314	4.79126E+01	1.30012E-05	0.000 %	1.95019E-05	0.006 %	1.31588E-10	-157.0708	1.49272E+00	0.9903
319	4.86755E+01	5.09204E-06	0.000 %	7.37747E-06	0.001 %	2.03200E-11	-177.7330	1.50269E+00	0.9200
324	4.94385E+01	1.42197E-06	0.000 %	3.93228E-06	0.000 %	2.14074E-12	-215.1326	2.03007E+00	0.5389
329	5.02014E+01	1.67711E-06	0.000 %	7.07111E-06	0.001 %	5.84479E-12	-207.4392	3.38451E+00	0.8931
334	5.09644E+01	1.32969E-06	0.000 %	7.45625E-06	0.001 %	4.71537E-12	-205.4811	5.11384E+00	0.8317
339	5.17273E+01	1.13292E-06	0.000 %	7.01528E-06	0.001 %	3.15505E-12	-181.2458	4.25235E+00	0.5223
344	5.24902E+01	8.44581E-07	0.000 %	5.59568E-06	0.000 %	2.14694E-12	-199.9317	3.77121E+00	0.7324
349	5.32532E+01	7.77501E-07	0.000 %	6.25135E-06	0.001 %	4.74224E-13	-290.1505	1.50422E+00	0.0350
354	5.40161E+01	1.44522E-06	0.000 %	5.56505E-06	0.000 %	2.94615E-12	-255.7959	2.70469E+00	0.4761
359	5.47790E+01	1.41723E-06	0.000 %	4.90421E-06	0.000 %	2.03035E-12	-333.1109	1.93832E+00	0.3133
364	5.55420E+01	1.65542E-06	0.000 %	3.34459E-06	0.000 %	2.36277E-12	-348.9522	1.55124E+00	0.6688
369	5.63049E+01	2.82731E-06	0.000 %	3.40595E-06	0.000 %	3.55813E-12	-324.1656	8.53505E-01	0.5020
374	5.70679E+01	3.87492E-06	0.000 %	2.40726E-06	0.000 %	4.11673E-12	14.5599	5.25730E-01	0.7162
379	5.78308E+01	4.48280E-06	0.000 %	1.60319E-06	0.000 %	1.71655E-12	-72.1660	1.63792E-01	0.2098
384	5.85937E+01	5.08032E-06	0.000 %	3.41555E-06	0.000 %	7.22283E-12	-115.8948	5.36611E-01	0.6371
389	5.93567E+01	4.60837E-06	0.000 %	5.47701E-06	0.000 %	1.18930E-11	-94.7456	1.07381E+00	0.8163
394	6.01196E+01	4.13350E-06	0.000 %	7.36706E-06	0.001 %	1.15964E-11	-89.0456	1.26747E+00	0.5193
399	6.08825E+01	3.65498E-06	0.000 %	5.51333E-06	0.000 %	9.13335E-12	-53.6254	1.31095E+00	0.7553
404	6.16455E+01	3.97394E-06	0.000 %	6.11306E-06	0.001 %	9.97061E-12	-44.0658	1.21063E+00	0.6194
409	6.24084E+01	4.91742E-06	0.000 %	5.22043E-06	0.000 %	1.25944E-11	-47.8944	9.98693E-01	0.8850
414	6.31714E+01	4.55434E-06	0.000 %	4.58527E-06	0.000 %	1.08393E-11	-41.7535	1.30203E+00	0.9483
419	6.39343E+01	4.95884E-06	0.000 %	4.13032E-06	0.000 %	9.89673E-12	-28.2604	7.58621E-01	0.8550
424	6.46973E+01	4.78131E-06	0.000 %	4.17102E-06	0.000 %	9.42193E-12	-41.7610	7.90275E-01	0.8207
429	6.54602E+01	4.43043E-06	0.000 %	4.01751E-06	0.000 %	8.48763E-12	-31.8245	8.29134E-01	0.8360
434	6.62231E+01	5.55971E-06	0.000 %	4.28906E-06	0.000 %	1.12235E-11	-31.2470	6.33736E-01	0.8115
439	6.69861E+01	6.54386E-06	0.000 %	4.65503E-06	0.000 %	1.50082E-11	-25.4794	6.72031E-01	0.8925
444	6.77490E+01	7.83287E-06	0.000 %	5.20183E-06	0.000 %	1.08592E-11	-32.5513	5.89404E-01	0.7877
************	************	0.00000E+00	0.000 %	0.00000E+00	0.000 %	************	************	************	************
************	************	************	0.000 %	************	0.000 %	************	************	************	************

SET TITLE........................ VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSA USER NAME................. SLM
SET - .SVG COMMENTS.................. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SVG_COMMENTS.............. 1004 RUNTITLE FFID=521 .50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 29 CHAN = 17

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM AMPLITUDE G11-APIT	INPUT % OF VAR	OUTPUT IN UNITS OF MM AMPLITUDE G22-APIT	OUTPUT % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	4.06367E-03	0.409 %	4.06367E-03	0.409 %	8.61204E-06	0.0000	1.00000E+00	1.0000
9	1.37329E+00	2.13357E-03	0.113 %	2.13357E-03	0.113 %	2.37401E-06	0.0000	1.00000E+00	1.0000
14	2.13623E+00	6.45174E-04	0.010 %	6.45174E-04	0.010 %	2.17082E-07	0.0000	1.00000E+00	1.0000
19	2.89917E+00	4.38571E-04	0.006 %	4.38571E-04	0.006 %	1.24483E-07	0.0000	1.00000E+00	1.0000
24	3.66211E+00	3.59033E-04	0.003 %	3.59033E-04	0.003 %	5.72261E-08	0.0000	1.00000E+00	1.0000
29	4.42505E+00	2.02051E-04	0.001 %	2.02051E-04	0.001 %	2.12903E-08	0.0000	1.00000E+00	1.0000
34	5.18799E+00	1.47167E-04	0.001 %	1.47167E-04	0.001 %	1.12951E-08	0.0000	1.00000E+00	1.0000
39	5.95093E+00	6.20965E-05	0.000 %	6.20965E-05	0.000 %	2.01097E-09	0.0000	1.00000E+00	1.0000
44	6.71387E+00	8.73243E-05	0.000 %	8.73243E-05	0.000 %	3.97685E-09	0.0000	1.00000E+00	1.0000
49	7.47681E+00	6.87330E-05	0.000 %	6.87330E-05	0.000 %	2.46373E-09	0.0000	1.00000E+00	1.0000
54	8.23975E+00	6.12378E-05	0.000 %	6.12378E-05	0.000 %	1.95573E-09	0.0000	1.00000E+00	1.0000
59	9.00269E+00	1.42557E-04	0.001 %	1.42557E-04	0.001 %	1.05985E-08	0.0000	1.00000E+00	1.0000
64	9.76562E+00	2.51156E-04	0.002 %	2.51156E-04	0.002 %	3.28973E-08	0.0000	1.00000E+00	1.0000
69	1.05286E+01	3.34922E-04	0.003 %	3.34922E-04	0.003 %	5.85004E-08	0.0000	1.00000E+00	1.0000
74	1.12915E+01	2.20041E-04	0.001 %	2.20041E-04	0.001 %	2.52509E-08	0.0000	1.00000E+00	1.0000
79	1.20544E+01	1.03419E-04	0.000 %	1.03419E-04	0.000 %	5.57789E-09	0.0000	1.00000E+00	1.0000
84	1.28174E+01	6.07095E-05	0.000 %	6.07095E-05	0.000 %	1.92213E-09	0.0000	1.00000E+00	1.0000
89	1.35803E+01	5.34320E-05	0.000 %	5.34320E-05	0.000 %	1.48892E-09	0.0000	1.00000E+00	1.0000
94	1.43433E+01	1.99962E-05	0.000 %	1.99962E-05	0.000 %	2.08528E-10	0.0000	1.00000E+00	1.0000
99	1.51062E+01	4.60676E-05	0.000 %	4.60676E-05	0.000 %	1.10678E-09	0.0000	1.00000E+00	1.0000
104	1.58691E+01	6.31754E-05	0.000 %	6.31754E-05	0.000 %	2.08145E-09	0.0000	1.00000E+00	1.0000
109	1.66321E+01	5.32195E-05	0.000 %	5.32195E-05	0.000 %	1.47713E-09	0.0000	1.00000E+00	1.0000
114	1.73950E+01	4.14411E-05	0.000 %	4.14411E-05	0.000 %	3.95635E-10	0.0000	1.00000E+00	1.0000
119	1.81580E+01	3.34069E-05	0.000 %	3.34069E-05	0.000 %	5.82025E-10	0.0000	1.00000E+00	1.0000
124	1.89209E+01	2.70296E-05	0.000 %	2.70296E-05	0.000 %	3.81021E-10	0.0000	1.00000E+00	1.0000
129	1.96838E+01	2.89000E-05	0.000 %	2.89000E-05	0.000 %	4.35579E-10	0.0000	1.00000E+00	1.0000
134	2.04468E+01	4.34313E-05	0.000 %	4.34313E-05	0.000 %	3.83731E-10	0.0000	1.00000E+00	1.0000
139	2.12097E+01	1.27061E-05	0.000 %	1.27061E-05	0.000 %	3.41965E-11	0.0000	1.00000E+00	1.0000
144	2.19727E+01	1.00207E-05	0.000 %	1.00207E-05	0.000 %	5.23575E-11	0.0000	1.00000E+00	1.0000
149	2.27356E+01	1.55321E-05	0.000 %	1.55321E-05	0.000 %	1.25814E-10	0.0000	1.00000E+00	1.0000
154	2.34985E+01	2.10287E-05	0.000 %	2.10287E-05	0.000 %	2.30619E-10	0.0000	1.00000E+00	1.0000
159	2.42615E+01	3.60159E-05	0.000 %	3.60159E-05	0.000 %	6.76483E-10	0.0000	1.00000E+00	1.0000
164	2.50244E+01	6.68814E-05	0.000 %	6.68814E-05	0.000 %	2.33282E-09	0.0000	1.00000E+00	1.0000
169	2.57874E+01	1.15591E-04	0.000 %	1.15591E-04	0.000 %	5.96817E-09	0.0000	1.00000E+00	1.0000
174	2.65503E+01	1.68543E-04	0.001 %	1.68543E-04	0.001 %	1.48147E-08	0.0000	1.00000E+00	1.0000
179	2.73132E+01	2.44894E-04	0.001 %	2.44894E-04	0.001 %	3.12771E-08	0.0000	1.00000E+00	1.0000
184	2.80762E+01	2.77009E-04	0.002 %	2.77009E-04	0.002 %	4.00183E-08	0.0000	1.00000E+00	1.0000
189	2.88391E+01	2.15032E-04	0.001 %	2.15032E-04	0.001 %	2.41143E-08	0.0000	1.00000E+00	1.0000
194	2.96020E+01	1.27861E-04	0.000 %	1.27861E-04	0.000 %	8.52607E-09	0.0000	1.00000E+00	1.0000

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                                                                        2.80523E-09        0.0000  1.00000E+00  1.0000 *
* 199* 3.03650E+01* 7.33421E-05  0.000 % * 7.33421E-05  0.000 % *      5.91311E-10        0.0000  1.00000E+00  1.0000 *
* 204* 3.11279E+01* 3.36723E-05  0.000 % * 3.36723E-05  0.000 % *      6.34971E-10        0.0000  1.00000E+00  1.0000 *
* 209* 3.18909E+01* 3.48933E-05  0.000 % * 3.48933E-05  0.000 % *      1.25202E-09        0.0000  1.00000E+00  1.0000 *
* 214* 3.26538E+01* 4.89971E-05  0.000 % * 4.89971E-05  0.000 % *      1.79655E-09        0.0000  1.00000E+00  1.0000 *
* 219* 3.34167E+01* 5.86929E-05  0.000 % * 5.86929E-05  0.000 % *      2.84623E-09        0.0000  1.00000E+00  1.0000 *
* 224* 3.41797E+01* 7.38760E-05  0.000 % * 7.38760E-05  0.000 % *      3.61311E-09        0.0000  1.00000E+00  1.0000 *
* 229* 3.49426E+01* 8.32353E-05  0.000 % * 8.32353E-05  0.000 % *      4.24395E-09        0.0000  1.00000E+00  1.0000 *
* 234* 3.57055E+01* 9.02092E-05  0.000 % * 9.02092E-05  0.000 % *      4.64587E-09        0.0000  1.00000E+00  1.0000 *
* 239* 3.64685E+01* 9.43841E-05  0.000 % * 9.43841E-05  0.000 % *      4.02899E-09        0.0000  1.00000E+00  1.0000 *
* 244* 3.72314E+01* 8.79948E-05  0.000 % * 8.78944E-05  0.000 % *      3.05539E-09        0.0000  1.00000E+00  1.0000 *
* 249* 3.79944E+01* 7.65417E-05  0.000 % * 7.65417E-05  0.000 % *      2.04582E-09        0.0000  1.00000E+00  1.0000 *
* 254* 3.87573E+01* 6.26323E-05  0.000 % * 6.26323E-05  0.000 % *      1.40439E-09        0.0000  1.00000E+00  1.0000 *
* 259* 3.95203E+01* 5.18930E-05  0.000 % * 5.18930E-05  0.000 % *      9.04931E-10        0.0000  1.00000E+00  1.0000 *
* 264* 4.02832E+01* 4.16555E-05  0.000 % * 4.16555E-05  0.000 % *      5.96041E-10        0.0000  1.00000E+00  1.0000 *
* 269* 4.10461E+01* 3.65327E-05  0.000 % * 3.55327E-05  0.000 % *      5.80741E-10        0.0000  1.00000E+00  1.0000 *
* 274* 4.18091E+01* 3.33700E-05  0.000 % * 3.33700E-05  0.000 % *      4.90339E-10        0.0000  1.00000E+00  1.0000 *
* 279* 4.25720E+01* 3.06629E-05  0.000 % * 3.06629E-05  0.000 % *      3.83452E-10        0.0000  1.00000E+00  1.0000 *
* 284* 4.33350E+01* 2.71157E-05  0.000 % * 2.71157E-05  0.000 % *      2.79882E-10        0.0000  1.00000E+00  1.0000 *
* 289* 4.40979E+01* 2.31661E-05  0.000 % * 2.31661E-05  0.000 % *      2.03350E-10        0.0000  1.00000E+00  1.0000 *
* 294* 4.48608E+01* 1.97464E-05  0.000 % * 1.97464E-05  0.000 % *      1.72573E-10        0.0000  1.00000E+00  1.0000 *
* 299* 4.56238E+01* 1.81961E-05  0.000 % * 1.81961E-05  0.000 % *      1.64274E-10        0.0000  1.00000E+00  1.0000 *
* 304* 4.63867E+01* 1.77480E-05  0.000 % * 1.77480E-05  0.000 % *      1.58564E-10        0.0000  1.00000E+00  1.0000 *
* 309* 4.71497E+01* 1.74423E-05  0.000 % * 1.74423E-05  0.000 % *      8.81535E-11        0.0000  1.00000E+00  1.0000 *
* 314* 4.79126E+01* 1.30012E-05  0.000 % * 1.30012E-05  0.000 % *      1.35224E-11        0.0000  1.00000E+00  1.0000 *
* 319* 4.86755E+01* 5.09204E-06  0.000 % * 5.09204E-06  0.000 % *      1.05450E-12        0.0000  1.00000E+00  1.0000 *
* 324* 4.94385E+01* 1.42197E-06  0.000 % * 1.42197E-06  0.000 % *      1.46583E-12        0.0000  1.00000E+00  1.0000 *
* 329* 5.02014E+01* 1.67711E-06  0.000 % * 1.67711E-06  0.000 % *      9.22079E-13        0.0000  1.00000E+00  1.0000 *
* 334* 5.09644E+01* 1.32969E-06  0.000 % * 1.32969E-06  0.000 % *      7.42155E-13        0.0000  1.00000E+00  1.0000 *
* 339* 5.17273E+01* 1.19292E-06  0.000 % * 1.19292E-06  0.000 % *      3.72009E-13        0.0000  1.00000E+00  1.0000 *
* 344* 5.24902E+01* 8.44581E-07  0.000 % * 8.44581E-07  0.000 % *      3.15263E-13        0.0000  1.00000E+00  1.0000 *
* 349* 5.32532E+01* 7.77501E-07  0.000 % * 7.77501E-07  0.000 % *      1.08923E-12        0.0000  1.00000E+00  1.000  *
* 354* 5.40161E+01* 1.44522E-06  0.000 % * 1.44522E-06  0.000 % *      1.04749E-12        0.0000  1.00000E+00  1.0000 *
* 359* 5.47790E+01* 1.41723E-06  0.000 % * 1.41723E-06  0.000 % *      1.43091E-12        0.0000  1.00000E+00  1.0000 *
* 364* 5.55420E+01* 1.65642E-06  0.000 % * 1.65642E-06  0.000 % *      4.16884E-12        0.0000  1.00000E+00  1.0000 *
* 369* 5.63049E+01* 2.82731E-06  0.000 % * 2.82731E-06  0.000 % *      7.83061E-12        0.0000  1.00000E+00  1.0000 *
* 374* 5.70679E+01* 3.87492E-06  0.000 % * 3.87492E-06  0.000 % *      1.04802E-11        0.0000  1.00000E+00  1.0000 *
* 379* 5.78308E+01* 4.48280E-06  0.000 % * 4.48280E-06  0.000 % *      1.34602E-11        0.0000  1.00000E+00  1.0000 *
* 384* 5.85937E+01* 5.08032E-06  0.000 % * 5.08032E-06  0.000 % *      1.10755E-11        0.0000  1.00000E+00  1.0000 *
* 389* 5.93567E+01* 4.60837E-06  0.000 % * 4.60837E-06  0.000 % *      9.14923E-12        0.0000  1.00000E+00  1.0000 *
* 394* 6.01195E+01* 4.18850E-06  0.000 % * 4.18850E-06  0.000 % *      5.96692E-12        0.0000  1.00000E+00  1.0000 *
* 399* 6.08826E+01* 3.65498E-06  0.000 % * 3.65498E-06  0.000 % *      8.23591E-12        0.0000  1.00000E+00  1.0000 *
* 404* 6.16455E+01* 3.97394E-06  0.000 % * 3.97394E-06  0.000 % *      1.26109E-11        0.0000  1.00000E+00  1.0000 *
* 409* 6.24084E+01* 4.91742E-06  0.000 % * 4.91742E-06  0.000 % *      1.08174E-11        0.0000  1.00000E+00  1.0000 *
* 414* 6.31714E+01* 4.55434E-06  0.000 % * 4.55434E-06  0.000 % *      1.28760E-11        0.0000  1.00000E+00  1.0000 *
* 419* 6.39343E+01* 4.96884E-06  0.000 % * 4.96884E-06  0.000 % *      1.19224E-11        0.0000  1.00000E+00  1.0000 *
* 424* 6.46973E+01* 4.78131E-06  0.000 % * 4.78131E-06  0.000 % *      1.02367E-11        0.0000  1.00000E+00  1.0000 *
* 429* 6.54602E+01* 4.43043E-06  0.000 % * 4.43043E-06  0.000 % *      1.61784E-11        0.0000  1.00000E+00  1.0000 *
* 434* 6.62231E+01* 5.56971E-06  0.000 % * 5.56971E-06  0.000 % *      2.23325E-11        0.0000  1.00000E+00  1.0000 *
* 439* 6.69861E+01* 6.54386E-06  0.000 % * 6.54386E-06  0.000 % *      3.19972E-11        0.0000  1.00000E+00  1.0000 *
* 444* 6.77490E+01* 7.83287E-06  0.000 % * 7.83287E-06  0.000 % ****************************************************
******************** 0.00000E+00  0.000 % * 0.00000E+00  0.000 % ****************************************************
**********************************************************************************************************************
********************************     0.000 % ************  0.000 % ***************************************************
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SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME....................GLM
SET - .SVE COMMENTS................ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS.............. 1009 RUNTITLE FFID=621 50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 31 CHAN = 19

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APIT	INPUT AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP2T	OUTPUT AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	4.06367E-03	0.409 %	2.87268E-03	0.120 %	4.42827E-06	281.4056	5.14195E-01	0.5291
9	1.37329E+00	2.13357E-03	0.113 %	1.92248E-03	0.054 %	1.00494E-06	250.9322	4.23308E-01	0.2207
14	2.13623E+00	6.45174E-04	0.010 %	1.76164E-03	0.045 %	9.04993E-08	-243.2058	4.16889E-01	0.0233
19	2.89917E+00	4.88571E-04	0.006 %	1.85649E-03	0.050 %	2.73535E-07	-78.6723	2.19729E+00	0.3344
24	3.66211E+00	3.59033E-04	0.003 %	1.47832E-03	0.032 %	2.64131E-08	289.9389	3.92900E-01	0.0091
29	4.42505E+00	2.02051E-04	0.001 %	1.21884E-03	0.022 %	4.94305E-08	210.0791	2.32168E+00	0.1481
34	5.18799E+00	1.47167E-04	0.001 %	1.05574E-03	0.016 %	5.42057E-08	80.1182	4.79905E+00	0.4475
39	5.95093E+00	6.20965E-05	0.000 %	9.23112E-04	0.012 %	1.85631E-08	137.6523	9.23094E+00	0.3856
44	6.71387E+00	8.73243E-05	0.000 %	7.91579E-04	0.009 %	2.15383E-08	142.6779	5.41603E+00	0.3570
49	7.47681E+00	6.87330E-05	0.000 %	7.10103E-04	0.007 %	1.07841E-08	112.5843	4.37708E+00	0.1795
54	8.23975E+00	6.12378E-05	0.000 %	6.41047E-04	0.006 %	7.90729E-09	167.6210	4.04313E+00	0.1492
59	9.00269E+00	1.42557E-04	0.001 %	5.97833E-04	0.005 %	3.97523E-08	178.1619	3.75075E+00	0.7999
64	9.76562E+00	2.51156E-04	0.002 %	6.05421E-04	0.005 %	7.52329E-08	121.5059	2.28693E+00	0.9001
69	1.05286E+01	3.34922E-04	0.003 %	5.83845E-04	0.005 %	8.97983E-08	55.2609	1.53500E+00	0.7754
74	1.12915E+01	2.20041E-04	0.001 %	5.66469E-04	0.005 %	6.04862E-08	4.5962	2.39541E+00	0.8658
79	1.20544E+01	1.03419E-04	0.000 %	4.85465E-04	0.003 %	2.29432E-08	7.1098	4.11325E+00	0.7677
84	1.28174E+01	6.07095E-05	0.000 %	4.16916E-04	0.003 %	1.09689E-08	9.9852	5.70661E+00	0.5905
89	1.35803E+01	5.34320E-05	0.000 %	3.53378E-04	0.002 %	8.32029E-09	-24.1162	5.58812E+00	0.6752
94	1.43433E+01	1.99962E-05	0.000 %	3.58564E-04	0.002 %	1.74703E-09	-181.9988	8.37774E+00	0.2183
99	1.51062E+01	4.60676E-05	0.000 %	3.28232E-04	0.002 %	7.73065E-09	-277.2841	6.98481E+00	0.9610
104	1.58691E+01	6.31754E-05	0.000 %	3.35876E-04	0.002 %	1.09220E-08	-310.0939	5.24730E+00	0.9741
109	1.66321E+01	5.32195E-05	0.000 %	3.25223E-04	0.002 %	8.92235E-09	-333.8790	6.04044E+00	0.9773
114	1.73950E+01	4.14411E-05	0.000 %	3.06178E-04	0.001 %	6.49362E-09	-351.6070	7.25023E+00	0.9630
119	1.81580E+01	3.34069E-05	0.000 %	2.95825E-04	0.001 %	5.07495E-09	-6.9372	8.71950E+00	0.9695
124	1.89209E+01	2.70296E-05	0.000 %	2.89515E-04	0.001 %	3.89580E-09	-0.1156	1.02246E+01	0.9112
129	1.96838E+01	2.89000E-05	0.000 %	2.87637E-04	0.001 %	4.25223E-09	4.5530	9.76224E+00	0.9621
134	2.04468E+01	4.34313E-05	0.000 %	2.94462E-04	0.001 %	6.43512E-09	-33.7046	6.54155E+00	0.9309
139	2.12097E+01	1.27061E-05	0.000 %	2.92112E-04	0.001 %	1.60350E-09	-77.5173	1.30447E+01	0.6862
144	2.19727E+01	1.00207E-05	0.000 %	3.00045E-04	0.001 %	1.25572E-09	-176.4950	2.39981E+01	0.6423
149	2.27356E+01	1.55321E-05	0.000 %	3.04044E-04	0.001 %	2.35632E-09	-224.0653	1.37235E+01	0.9154
154	2.34985E+01	2.10287E-05	0.000 %	3.12067E-04	0.001 %	3.27705E-09	-208.8011	1.42099E+01	0.9169
159	2.42615E+01	3.60159E-05	0.000 %	2.96811E-04	0.001 %	5.49845E-09	-194.4753	8.12798E+00	0.9727
164	2.50244E+01	6.68814E-05	0.000 %	2.76495E-04	0.001 %	9.61341E-09	-197.6089	4.12094E+00	0.9936
169	2.57874E+01	1.15541E-04	0.000 %	2.81477E-04	0.001 %	1.69232E-08	-214.4997	2.42854E+00	0.9947
174	2.65503E+01	1.63543E-04	0.001 %	3.00087E-04	0.001 %	2.63383E-08	-234.3520	1.77786E+00	0.9971
179	2.73132E+01	2.44874E-04	0.001 %	3.71522E-04	0.002 %	4.73937E-08	-258.2250	1.51520E+00	0.9975
184	2.80762E+01	2.77009E-04	0.002 %	4.48357E-04	0.003 %	5.46939E-08	-288.7971	1.51661E+00	0.9976
189	2.88391E+01	2.15032E-04	0.001 %	4.71090E-04	0.003 %	5.27561E-08	-312.7957	2.18775E+00	0.9972
194	2.96020E+01	1.27861E-04	0.000 %	4.50369E-04	0.003 %	2.85919E-08	-322.5911	3.35347E+00	0.9064

199	3.03659E+01	7.33421E-05	0.000 %	4.51996E-04	0.003 %	1.72390E-08	-335.0141	6.14521E+00	0.9945
204	3.11279E+01	3.55723E-05	0.000 %	4.53057E-04	0.003 %	7.38194E-09	-310.9526	1.33296E+01	0.9815
209	3.18909E+01	3.48933E-05	0.000 %	4.41405E-04	0.003 %	7.94269E-09	-260.4552	1.25087E+01	0.9779
214	3.26539E+01	4.89971E-05	0.000 %	4.28939E-04	0.003 %	1.09477E-08	-237.6555	8.74404E+00	0.9976
219	3.34167E+01	5.86929E-05	0.000 %	4.29882E-04	0.003 %	1.31419E-08	-232.2412	7.31498E+00	0.9975
224	3.41797E+01	7.38760E-05	0.000 %	4.29891E-04	0.003 %	1.65534E-08	-226.0998	5.81582E+00	0.9983
229	3.49426E+01	8.32353E-05	0.000 %	4.14402E-04	0.003 %	1.79808E-08	-225.3192	4.97649E+00	0.9991
234	3.57055E+01	9.02092E-05	0.000 %	3.77432E-04	0.002 %	1.77427E-08	-223.9054	4.18070E+00	0.9984
239	3.64685E+01	9.43841E-05	0.000 %	3.31092E-04	0.002 %	1.62917E-08	-229.4904	3.50671E+00	0.9993
244	3.72314E+01	8.78948E-05	0.000 %	2.98659E-04	0.001 %	1.36882E-08	-238.5362	3.39742E+00	0.9997
249	3.79944E+01	7.65417E-05	0.000 %	2.80018E-04	0.001 %	1.11713E-08	-245.4128	3.55634E+00	0.9989
254	3.87573E+01	6.26323E-05	0.000 %	2.61935E-04	0.001 %	8.55003E-09	-250.1895	4.17927E+00	0.9986
259	3.95203E+01	5.18930E-05	0.000 %	2.37372E-04	0.001 %	5.41869E-09	-251.4949	4.57044E+00	0.9983
264	4.02832E+01	4.16555E-05	0.000 %	1.97493E-04	0.001 %	4.28530E-09	-253.8378	4.73549E+00	0.9976
269	4.10461E+01	3.65327E-05	0.000 %	1.79690E-04	0.000 %	3.42261E-09	-250.8539	4.91735E+00	0.9995
274	4.18091E+01	3.33700E-05	0.000 %	1.67076E-04	0.000 %	2.90655E-09	-250.9898	5.00491E+00	0.9993
279	4.25720E+01	3.06629E-05	0.000 %	1.51076E-04	0.000 %	2.41385E-09	-252.7000	4.92284E+00	0.9983
284	4.33350E+01	2.71157E-05	0.000 %	1.32641E-04	0.000 %	1.87424E-09	-256.3490	4.88782E+00	0.9984
289	4.40979E+01	2.31661E-05	0.000 %	1.14111E-04	0.000 %	1.37713E-09	-258.0602	4.92048E+00	0.9978
294	4.48608E+01	1.97464E-05	0.000 %	9.39491E-05	0.000 %	1.01817E-09	-256.5543	5.00700E+00	0.9984
299	4.56238E+01	1.81961E-05	0.000 %	9.19704E-05	0.000 %	8.71201E-10	-256.2727	5.04533E+00	0.9964
304	4.63867E+01	1.77480E-05	0.000 %	9.48419E-05	0.000 %	8.76585E-10	-246.6911	5.33612E+00	0.9971
309	4.71497E+01	1.74423E-05	0.000 %	8.95565E-05	0.000 %	8.13925E-10	-238.5557	5.12988E+00	0.9982
314	4.79126E+01	1.30012E-05	0.000 %	6.36074E-05	0.000 %	4.29069E-10	-227.7946	4.86729E+00	0.9898
319	4.86755E+01	5.09204E-06	0.000 %	2.42175E-05	0.000 %	6.33383E-11	-215.9660	4.59874E+00	0.9761
324	4.94385E+01	1.42197E-06	0.000 %	6.35822E-06	0.000 %	4.15707E-12	-210.0226	3.94221E+00	0.7773
329	5.02014E+01	1.67711E-06	0.000 %	3.31323E-06	0.000 %	2.33095E-12	-222.6881	1.58906E+00	0.6470
334	5.09644E+01	1.32969E-06	0.000 %	2.60285E-06	0.000 %	1.39874E-12	-211.4471	1.51694E+00	0.6005
339	5.17273E+01	1.19292E-06	0.000 %	1.91229E-06	0.000 %	8.96527E-13	-331.2553	1.20800E+00	0.5679
344	5.24902E+01	8.44581E-07	0.000 %	2.92206E-06	0.000 %	1.00317E-12	-13.2902	2.59664E+00	0.6075
349	5.32532E+01	7.77501E-07	0.000 %	3.44911E-06	0.000 %	2.12509E-13	69.1172	6.74067E-01	0.0231
354	5.40161E+01	1.44522E-06	0.000 %	4.04002E-06	0.000 %	1.05782E-12	292.3296	9.71120E-01	0.1207
359	5.47790E+01	1.41723E-06	0.000 %	4.93299E-06	0.000 %	1.61504E-12	150.0453	1.54182E+00	0.1962
364	5.55420E+01	1.65542E-06	0.000 %	4.08425E-06	0.000 %	3.18375E-12	164.0755	2.22498E+00	0.8143
369	5.63049E+01	2.82731E-06	0.000 %	5.19530E-06	0.000 %	5.74822E-12	201.2891	1.37885E+00	0.5631
374	5.70679E+01	3.87492E-06	0.000 %	5.05724E-06	0.000 %	9.38801E-12	183.4856	1.19889E+00	0.8438
379	5.78308E+01	4.48280E-06	0.000 %	5.01248E-06	0.000 %	1.02785E-11	184.1394	9.80763E-01	0.7693
384	5.85937E+01	5.08032E-06	0.000 %	4.73559E-06	0.000 %	1.02455E-11	169.8021	7.51176E-01	0.6668
389	5.93567E+01	4.60837E-06	0.000 %	4.65720E-06	0.000 %	1.00869E-11	150.0131	9.10740E-01	0.8121
394	6.01196E+01	4.18850E-06	0.000 %	5.16541E-06	0.000 %	8.28239E-12	139.4597	9.05250E-01	0.5388
399	6.08826E+01	3.65498E-06	0.000 %	3.61782E-06	0.000 %	5.25647E-12	164.1615	8.98025E-01	0.8231
404	6.16455E+01	3.97394E-06	0.000 %	4.82037E-06	0.000 %	8.06187E-12	175.5696	9.78867E-01	0.6512
409	6.24084E+01	4.91742E-06	0.000 %	4.70841E-06	0.000 %	1.14828E-11	168.1697	9.10546E-01	0.9043
414	6.31714E+01	4.55434E-06	0.000 %	4.38571E-06	0.000 %	1.03065E-11	171.2253	9.52784E-01	0.9790
419	6.39343E+01	4.96884E-06	0.000 %	4.18483E-06	0.000 %	1.03460E-11	185.2752	8.03512E-01	0.9102
424	6.46973E+01	4.78131E-06	0.000 %	4.00525E-06	0.000 %	9.39055E-12	182.4789	7.87637E-01	0.8841
429	6.54602E+01	4.43043E-06	0.000 %	3.59701E-06	0.000 %	8.02021E-12	190.2792	7.33473E-01	0.8815
434	6.62231E+01	5.56971E-06	0.000 %	4.06968E-06	0.000 %	1.09903E-11	182.5821	6.79321E-01	0.8644
439	6.69861E+01	6.54386E-06	0.000 %	4.55727E-06	0.000 %	1.49591E-11	190.6312	6.59834E-01	0.9251
444	6.77490E+01	7.83287E-06	0.000 %	5.31170E-06	0.000 %	2.05083E-11	189.0942	5.40932E-01	0.8933
******	******	0.00000E+00	0.000 %	0.00000E+00	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******
******	******	******	0.000 %	******	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******

SET TITLE.......................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSN USER NAME................... LM
SET - .SVS COMMENTS................ INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS................ 1004 RUNTITLE FFID=621 .50 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE------------ 9000 ENDANALYSIS ; VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 32 CHAN = 20

INDEX	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APII	AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-AP3T	AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	4.06367E-03	0.409 %	5.79165E-03	0.243 %	2.62674E-06	-7.4313	3.05008E-01	0.0458
9	1.37329E+00	2.13357E-03	0.113 %	1.53997E-03	0.017 %	1.04977E-06	-2.7786	4.42194E-01	0.3753
14	2.13623E+00	6.45174E-04	0.010 %	1.06711E-03	0.008 %	7.67587E-08	-69.3717	3.53592E-01	0.0457
19	2.89917E+00	4.88571E-04	0.006 %	4.17068E-04	0.001 %	4.91625E-08	121.6048	3.94920E-01	0.2140
24	3.66211E+00	3.53033E-04	0.003 %	2.32601E-04	0.000 %	1.55213E-08	-213.9750	2.01139E-01	0.0964
29	4.42505E+00	2.02051E-04	0.001 %	1.02343E-04	0.000 %	3.78885E-09	-215.9014	1.77957E-01	0.1234
34	5.18799E+00	1.47167E-04	0.001 %	8.52650E-05	0.000 %	2.37455E-09	-276.6556	2.10229E-01	0.1317
39	5.95093E+00	6.20965E-05	0.000 %	5.80260E-05	0.000 %	1.41774E-09	227.3558	7.05005E-01	0.5692
44	6.71387E+00	8.73243E-05	0.000 %	5.97863E-05	0.000 %	1.36965E-09	-298.2810	3.44405E-01	0.2531
49	7.47681E+00	6.87330E-05	0.000 %	6.70133E-05	0.000 %	1.36385E-09	-239.3683	5.33565E-01	0.3224
54	8.23975E+00	5.12378E-05	0.000 %	5.53949E-05	0.000 %	9.01213E-10	-186.7380	4.09677E-01	0.1979
59	9.00269E+00	1.42557E-04	0.001 %	6.23893E-05	0.000 %	2.91785E-09	-164.0267	2.75306E-01	0.3957
64	9.76562E+00	2.51156E-04	0.002 %	7.92239E-05	0.000 %	9.23159E-09	-231.9884	2.80621E-01	0.7914
69	1.05286E+01	3.34922E-04	0.003 %	7.56344E-05	0.000 %	1.11557E-08	-280.1397	1.90695E-01	0.7131
74	1.12915E+01	2.20041E-04	0.001 %	7.44081E-05	0.000 %	7.73094E-09	-322.3070	3.06165E-01	0.8197
79	1.20544E+01	1.03419E-04	0.000 %	6.73131E-05	0.000 %	2.91171E-09	29.4754	5.22003E-01	0.6432
84	1.28174E+01	6.07095E-05	0.000 %	6.84463E-05	0.000 %	1.35860E-09	26.9390	7.06816E-01	0.3930
89	1.35803E+01	5.34320E-05	0.000 %	4.56014E-05	0.000 %	8.55044E-10	-15.3620	5.74269E-01	0.4335
94	1.43433E+01	1.99962E-05	0.000 %	4.83969E-05	0.000 %	3.03368E-10	-180.7346	1.45480E+00	0.3613
99	1.51062E+01	4.60676E-05	0.000 %	5.78299E-05	0.000 %	1.37684E-09	-278.2575	1.24401E+00	0.9820
104	1.58691E+01	6.31754E-05	0.000 %	6.54178E-05	0.000 %	2.12513E-09	-306.0522	1.02099E+00	0.9722
109	1.66321E+01	5.32195E-05	0.000 %	6.67552E-05	0.000 %	1.81970E-09	-330.0603	1.23194E+00	0.9645
114	1.73950E+01	4.14411E-05	0.000 %	7.08671E-05	0.000 %	1.48763E-09	-350.3367	1.66104E+00	0.9435
119	1.81580E+01	3.34069E-05	0.000 %	7.07656E-05	0.000 %	1.21312E-09	-2.8578	2.08431E+00	0.9689
124	1.89209E+01	2.70296E-05	0.000 %	7.71627E-05	0.000 %	1.03419E-09	6.0180	2.71426E+00	0.9040
129	1.96838E+01	2.89000E-05	0.000 %	7.50495E-05	0.000 %	1.10342E-09	16.3389	2.53323E+00	0.9516
134	2.04468E+01	4.34313E-05	0.000 %	7.54095E-05	0.000 %	1.65517E-09	-23.4013	1.68254E+00	0.9146
139	2.12097E+01	1.27061E-05	0.000 %	7.14848E-05	0.000 %	3.94787E-10	-68.6319	4.58887E+00	0.6945
144	2.19727E+01	1.00207E-05	0.000 %	7.34953E-05	0.000 %	3.02530E-10	-175.3879	5.77704E+00	0.6204
149	2.27356E+01	1.55321E-05	0.000 %	4.57273E-05	0.000 %	3.49825E-10	-260.7157	2.78050E+00	0.8920
154	2.34985E+01	2.10287E-05	0.000 %	4.05717E-05	0.000 %	4.27808E-10	-260.7539	1.85504E+00	0.9245
159	2.42615E+01	3.60159E-05	0.000 %	6.55514E-05	0.000 %	1.20708E-09	-248.1309	1.78434E+00	0.9611
164	2.50244E+01	6.68814E-05	0.000 %	6.67058E-05	0.000 %	2.32020E-09	-239.3141	9.94592E-01	0.9944
169	2.57874E+01	1.15591E-04	0.000 %	7.78710E-05	0.000 %	4.68903E-09	-228.3740	6.72921E-01	0.9978
174	2.65503E+01	1.68543E-04	0.001 %	1.19865E-04	0.000 %	1.05271E-08	-234.0500	7.10584E-01	0.9983
179	2.73132E+01	2.44874E-04	0.001 %	1.36234E-04	0.000 %	1.73877E-08	-243.7650	5.55926E-01	0.9987
184	2.80762E+01	2.77009E-04	0.002 %	1.53759E-04	0.000 %	2.21973E-08	-274.4889	5.54692E-01	0.9986
189	2.88391E+01	2.15032E-04	0.001 %	1.59307E-04	0.000 %	1.78310E-08	-302.1147	7.39438E-01	0.9962
194	2.96020E+01	1.27861E-04	0.000 %	1.49857E-04	0.000 %	9.38641E-09	-313.8955	1.10091E+00	0.8823

199	3.03650E+01	7.33421E-05	0.000 %	1.35185E-04	0.000 %	5.15615E-09	-335.2844	1.33802E+00	0.9944
204	3.11279E+01	3.36723E-05	0.000 %	1.36145E-04	0.000 %	2.36921E-09	-318.5492	4.00670E+00	0.9820
209	3.18909E+01	3.48333E-05	0.000 %	1.65456E-04	0.000 %	2.97699E-09	-266.8256	4.58838E+00	0.9776
214	3.26538E+01	4.89971E-05	0.000 %	1.88436E-04	0.000 %	4.81081E-09	-242.1521	3.84245E+00	0.9982
219	3.34167E+01	5.86929E-05	0.000 %	1.98615E-04	0.000 %	5.07155E-09	-233.4821	3.37955E+00	0.9974
224	3.41797E+01	7.38760E-05	0.000 %	2.23361E-04	0.000 %	8.60067E-09	-227.9339	3.02173E+00	0.9989
229	3.49426E+01	8.32353E-05	0.000 %	2.33459E-04	0.000 %	1.01313E-08	-230.7153	2.80416E+00	0.9995
234	3.57056E+01	9.02092E-05	0.000 %	2.27864E-04	0.000 %	1.07142E-08	-228.5005	2.52457E+00	0.9989
239	3.64685E+01	9.43841E-05	0.000 %	1.95643E-04	0.000 %	9.62790E-09	-232.1378	2.07236E+00	0.9995
244	3.72314E+01	8.78948E-05	0.000 %	1.68707E-04	0.000 %	7.73213E-09	-240.0084	1.91913E+00	0.9997
249	3.79944E+01	7.65417E-05	0.000 %	1.55021E-04	0.000 %	6.18403E-09	-249.3098	2.02398E+00	0.9987
254	3.87573E+01	6.26323E-05	0.000 %	1.30198E-04	0.000 %	4.24955E-09	-253.6389	2.07719E+00	0.9985
259	3.95203E+01	5.18930E-05	0.000 %	1.07153E-04	0.000 %	2.89525E-09	-253.5430	2.06158E+00	0.9968
264	4.02832E+01	4.16555E-05	0.000 %	8.55324E-05	0.000 %	1.85559E-09	-256.4824	2.05053E+00	0.9973
269	4.10461E+01	3.65327E-05	0.000 %	7.51693E-05	0.000 %	1.44993E-09	-253.1873	2.08318E+00	0.9983
274	4.18091E+01	3.33700E-05	0.000 %	6.87070E-05	0.000 %	1.19492E-09	-255.0343	2.05753E+00	0.9987
279	4.25720E+01	3.06629E-05	0.000 %	5.97903E-05	0.000 %	9.55013E-10	-258.4750	1.94766E+00	0.9977
284	4.33350E+01	2.71157E-05	0.000 %	5.07483E-05	0.000 %	7.16774E-10	-263.9853	1.86927E+00	0.9976
289	4.40979E+01	2.31661E-05	0.000 %	4.12172E-05	0.000 %	4.97180E-10	-266.2882	1.77639E+00	0.9968
294	4.48608E+01	1.97464E-05	0.000 %	3.57579E-05	0.000 %	3.65855E-10	-261.6959	1.79914E+00	0.9871
299	4.56238E+01	1.81961E-05	0.000 %	3.23778E-05	0.000 %	3.00890E-10	-262.2390	1.74252E+00	0.9590
304	4.63867E+01	1.77480E-05	0.000 %	3.29073E-05	0.000 %	2.92527E-10	-254.9986	1.78073E+00	0.9223
309	4.71497E+01	1.74423E-05	0.000 %	3.14352E-05	0.000 %	2.62965E-10	-247.9129	1.65738E+00	0.8457
314	4.79126E+01	1.30012E-05	0.000 %	2.32434E-05	0.000 %	1.32954E-10	-244.1143	1.50821E+00	0.7117
319	4.86755E+01	5.09204E-06	0.000 %	1.39486E-05	0.000 %	2.00053E-11	-243.4855	1.47942E+00	0.2917
324	4.94385E+01	1.42197E-06	0.000 %	1.14805E-05	0.000 %	9.84355E-13	-106.8293	9.33478E-01	0.0134
329	5.02014E+01	1.67711E-06	0.000 %	1.06990E-05	0.000 %	5.33359E-12	-45.0029	3.53601E+00	0.3249
334	5.09644E+01	1.32969E-06	0.000 %	1.00737E-05	0.000 %	4.15057E-12	-55.3052	4.50132E+00	0.3530
339	5.17273E+01	1.19292E-06	0.000 %	1.01553E-05	0.000 %	3.58152E-12	-39.5953	4.82583E+00	0.3214
344	5.24902E+01	8.44581E-07	0.000 %	9.13458E-06	0.000 %	1.59331E-12	290.9033	4.28299E+00	0.1568
349	5.32532E+01	7.77501E-07	0.000 %	9.40865E-06	0.000 %	1.87904E-12	98.9798	5.96022E+00	0.2426
354	5.40161E+01	1.44522E-06	0.000 %	8.41925E-06	0.000 %	3.81563E-12	100.4163	3.30291E+00	0.3615
359	5.47790E+01	1.41723E-06	0.000 %	8.70723E-06	0.000 %	5.12705E-12	65.1150	4.89462E+00	0.6347
364	5.55420E+01	1.65542E-06	0.000 %	9.00847E-06	0.000 %	7.65713E-12	67.6102	5.35123E+00	0.9682
369	5.63049E+01	2.82731E-06	0.000 %	7.50424E-06	0.000 %	1.06513E-11	83.4448	2.55501E+00	0.9024
374	5.70679E+01	3.87492E-06	0.000 %	6.76774E-06	0.000 %	1.34541E-11	68.0111	1.71814E+00	0.9677
379	5.78308E+01	4.48280E-06	0.000 %	6.71800E-06	0.000 %	1.54020E-11	61.5229	1.46963E+00	0.9617
384	5.85937E+01	5.08032E-06	0.000 %	6.32321E-06	0.000 %	1.66564E-11	48.1089	1.23745E+00	0.9885
389	5.93567E+01	4.60837E-06	0.000 %	7.18681E-06	0.000 %	1.70535E-11	40.1395	1.53974E+00	0.9748
394	6.01196E+01	4.18850E-06	0.000 %	5.51559E-06	0.000 %	1.20909E-11	43.6352	1.32151E+00	0.9715
399	6.08826E+01	3.65498E-06	0.000 %	3.53033E-06	0.000 %	5.49941E-12	68.5625	9.32896E-01	0.9328
404	6.16455E+01	3.97394E-06	0.000 %	2.58591E-06	0.000 %	4.10083E-12	129.9120	4.97921E-01	0.5427
409	6.24084E+01	4.91742E-06	0.000 %	2.90046E-06	0.000 %	5.95595E-12	159.3870	5.51582E-01	0.8745
414	6.31714E+01	4.55434E-06	0.000 %	3.51525E-06	0.000 %	8.33043E-12	182.3054	7.70098E-01	0.9412
419	6.39343E+01	4.95384E-06	0.000 %	3.93825E-06	0.000 %	9.63375E-12	185.7585	7.48198E-01	0.8911
424	6.46973E+01	4.78131E-06	0.000 %	2.12439E-06	0.000 %	3.75303E-12	188.3273	3.14787E-01	0.5020
429	6.54602E+01	4.43043E-06	0.000 %	2.08192E-06	0.000 %	3.56785E-12	126.3720	3.48533E-01	0.5501
434	6.62231E+01	5.56971E-06	0.000 %	2.79323E-06	0.000 %	7.04208E-12	131.2573	4.35277E-01	0.7533
439	6.69861E+01	6.94386E-06	0.000 %	2.15712E-06	0.000 %	6.01642E-12	135.3047	2.59401E-01	0.6679
444	6.77490E+01	7.83287E-06	0.000 %	3.02812E-06	0.000 %	1.09578E-11	142.1615	3.42774E-01	0.7862
******	******	0.00000E+00	0.000 %	0.00000E+00	0.000 %	******	******	******	******
******	******	******	******	******	******	******	******	******	******
******	******	******	0.000 %	******	0.000 %	******	******	******	******

SET TITLE...................... VERTICAL SINGLE PILE TEST USING WES VIBRATOR
DCASSA USER NAME................ GLM
SET - .SVJ COMMENTS.............. INERTIA MASSES ATTACHED TO VIBRATOR
RUN - SNGL COMMENTS............. 1004 RUNTITLE EPID=521 30 - 2 HERTZ SWEEP AT 8000 LB AMPLITUDE
ANALYSIS COMMAND TITLE---------- 9000 ENDANALYSIS 3 VERTICAL PILE DISP AND FORCE DATA
SHOT = 2020 SEQNO = 33 CHAN = 21

I N D E X	FREQUENCY IN HERTZ	INPUT IN UNITS OF MM G11-APLT	INPUT AMPLITUDE % OF VAR	OUTPUT IN UNITS OF MM G22-APLT	OUTPUT AMPLITUDE % OF VAR	MAGNITUDE OF G12	PHASE OF G12 OR H12 IN DEGREES	MAGNITUDE OF H12	COHERENCE
4	6.10352E-01	4.06367E-03	0.409 %	2.99290E-03	0.855 %	4.52758E-06	155.7321	5.25726E-01	0.5095
9	1.37329E+00	2.13357E-03	0.113 %	1.17493E-03	0.132 %	8.92113E-07	230.5132	3.75782E-01	0.4657
14	2.13623E+00	6.45174E-04	0.010 %	5.56455E-04	0.031 %	1.31358E-07	-244.5841	6.05109E-01	0.4750
19	2.89917E+00	4.88571E-04	0.005 %	2.94682E-04	0.008 %	3.58360E-09	-110.2426	6.89515E-02	0.0131
24	3.66211E+00	3.59033E-04	0.003 %	2.28967E-04	0.005 %	1.10453E-08	-104.3863	1.64300E-01	0.0664
29	4.42505E+00	2.02051E-04	0.001 %	1.30180E-04	0.002 %	9.88744E-09	-153.6621	4.64399E-01	0.5195
34	5.18799E+00	1.47167E-04	0.001 %	1.18522E-04	0.001 %	2.36070E-09	-212.5236	2.09002E-01	0.0673
39	5.95093E+00	6.20965E-05	0.000 %	7.47194E-05	0.001 %	1.66173E-09	123.0310	8.26336E-01	0.4716
44	6.71387E+00	8.73243E-05	0.000 %	6.21064E-05	0.000 %	1.26455E-09	176.2024	3.17980E-01	0.1999
49	7.47681E+00	6.87330E-05	0.000 %	4.47057E-05	0.000 %	3.56420E-10	145.8632	1.44564E-01	0.0495
54	8.23975E+00	6.12378E-05	0.000 %	3.76850E-05	0.000 %	5.02692E-10	150.1101	2.57035E-01	0.1745
59	9.00268E+00	1.42557E-04	0.001 %	3.08453E-05	0.000 %	2.12995E-09	149.8768	2.00966E-01	0.8626
64	9.76562E+00	2.51156E-04	0.002 %	3.28127E-05	0.000 %	3.75138E-09	95.4772	1.14034E-01	0.7619
69	1.05286E+01	3.34922E-04	0.003 %	2.38203E-05	0.000 %	3.66663E-09	53.0056	6.26771E-02	0.7766
74	1.12915E+01	2.20041E-04	0.001 %	1.92620E-05	0.000 %	1.46903E-09	-22.0851	5.81773E-02	0.4417
79	1.20544E+01	1.03419E-04	0.000 %	1.71363E-05	0.000 %	8.04634E-10	-93.3112	1.44254E-01	0.7579
84	1.28174E+01	6.07095E-05	0.000 %	1.95768E-05	0.000 %	5.19194E-10	-91.9925	2.70113E-01	0.7017
89	1.35803E+01	5.34320E-05	0.000 %	2.48674E-05	0.000 %	5.78949E-10	-122.1765	3.88837E-01	0.6980
94	1.43433E+01	1.99962E-05	0.000 %	2.88627E-05	0.000 %	1.30217E-10	-270.5969	6.24458E-01	0.1872
99	1.51062E+01	4.60676E-05	0.000 %	2.99635E-05	0.000 %	7.05201E-10	-358.3351	6.37164E-01	0.9596
104	1.58691E+01	6.31754E-05	0.000 %	2.61733E-05	0.000 %	8.37394E-10	-31.5934	4.02312E-01	0.9430
109	1.66321E+01	5.32195E-05	0.000 %	2.21380E-05	0.000 %	5.90652E-10	-65.4476	3.99872E-01	0.9241
114	1.73950E+01	4.14411E-05	0.000 %	2.02167E-05	0.000 %	4.27905E-10	-84.2245	4.77767E-01	0.9591
119	1.81580E+01	3.34069E-05	0.000 %	1.64713E-05	0.000 %	2.80777E-10	-113.0242	4.32414E-01	0.9573
124	1.89209E+01	2.70296E-05	0.000 %	2.16975E-05	0.000 %	2.96045E-10	-130.4358	7.76978E-01	0.9369
129	1.96838E+01	2.89000E-05	0.000 %	3.10764E-05	0.000 %	4.58237E-10	-138.0297	1.05202E+00	0.9572
134	2.04468E+01	4.34313E-05	0.000 %	4.06547E-05	0.000 %	8.86791E-10	-173.1008	9.01457E-01	0.9274
139	2.12097E+01	1.27061E-05	0.000 %	5.26610E-05	0.000 %	2.86722E-10	-212.8446	3.40539E+00	0.6751
144	2.19727E+01	1.00207E-05	0.000 %	5.14092E-05	0.000 %	2.60490E-10	-308.1335	4.97426E+00	0.6588
149	2.27356E+01	1.55321E-05	0.000 %	6.95755E-05	0.000 %	5.41960E-10	-347.4512	4.30763E+00	0.9247
154	2.34985E+01	2.10287E-05	0.000 %	8.01969E-05	0.001 %	8.44820E-10	-331.8714	3.56327E+00	0.9227
159	2.42615E+01	3.60159E-05	0.000 %	8.72033E-05	0.001 %	1.61692E-09	-312.4276	2.39018E+00	0.9745
164	2.50244E+01	6.68814E-05	0.000 %	7.97584E-05	0.001 %	2.77465E-09	-310.1464	1.18940E+00	0.9948
169	2.57874E+01	1.15531E-04	0.000 %	8.56745E-05	0.001 %	5.21400E-09	-320.1444	7.48259E-01	0.9958
174	2.65503E+01	1.68543E-04	0.001 %	9.49763E-05	0.001 %	8.33835E-09	-335.1038	5.52843E-01	0.9976
179	2.73132E+01	2.44394E-04	0.001 %	1.05427E-04	0.001 %	1.34497E-08	-355.1324	4.30018E-01	0.9979
184	2.80762E+01	2.77009E-04	0.002 %	1.15371E-04	0.001 %	1.66450E-08	-32.7031	4.15934E-01	0.9973
189	2.88391E+01	2.15032E-04	0.001 %	1.25472E-04	0.002 %	1.40473E-08	-62.9186	5.82538E-01	0.9967
194	2.96020E+01	1.27861E-04	0.000 %	1.32622E-04	0.002 %	8.40869E-09	-77.2843	9.86233E-01	0.9041

199	3.33650E+01	7.33421E-05	0.000 %	1.42074E-04	0.002 %	5.41861E-09	-88.9538	1.33158E+00	0.9943
204	3.11279E+01	3.36725E-05	0.000 %	1.43812E-04	0.002 %	2.50213E-09	-63.4776	4.23149E+00	0.9815
209	3.18909E+01	3.48933E-05	0.000 %	1.32098E-04	0.002 %	2.37455E-09	-13.1735	3.73964E+00	0.9758
214	3.26539E+01	4.89971E-05	0.000 %	1.22113E-04	0.001 %	3.11715E-09	8.0031	2.48970E+00	0.9980
219	3.34167E+01	5.86929E-05	0.000 %	1.24982E-04	0.001 %	3.82030E-09	9.2319	2.12646E+00	0.9972
224	3.41797E+01	7.38760E-05	0.000 %	1.33150E-04	0.002 %	3.12764E-09	11.0935	1.80153E+00	0.9991
229	3.49426E+01	8.32353E-05	0.000 %	1.34387E-04	0.002 %	5.83188E-09	10.2870	1.51407E+00	0.9994
234	3.57055E+01	9.02092E-05	0.000 %	1.24845E-04	0.001 %	5.87003E-09	9.5999	1.38316E+00	0.9983
239	3.64685E+01	9.43841E-05	0.000 %	1.10330E-04	0.001 %	5.42941E-09	3.6158	1.16865E+00	0.9995
244	3.72314E+01	8.78948E-05	0.009 %	1.00100E-04	0.001 %	4.58738E-09	-6.4903	1.13859E+00	0.9995
249	3.79944E+01	7.65417E-05	0.000 %	9.75803E-05	0.001 %	3.89189E-09	-15.4661	1.27378E+00	0.9983
254	3.87573E+01	6.26323E-05	0.000 %	9.05480E-05	0.001 %	2.95563E-09	-21.0286	1.44473E+00	0.9986
259	3.95203E+01	5.18930E-05	0.000 %	8.14524E-05	0.001 %	2.20195E-09	-23.0418	1.56790E+00	0.9978
264	4.02832E+01	4.16555E-05	0.000 %	6.89946E-05	0.000 %	1.49714E-09	-25.6622	1.65443E+00	0.9977
269	4.10461E+01	3.65327E-05	0.000 %	6.50375E-05	0.000 %	1.25751E-09	-22.0137	1.90667E+00	0.9989
274	4.18091E+01	3.33700E-05	0.000 %	6.53137E-05	0.000 %	1.15344E-09	-20.4781	1.98615E+00	0.9989
279	4.25720E+01	3.06629E-05	0.000 %	6.15021E-05	0.000 %	9.82462E-10	-19.8435	2.00364E+00	0.9979
284	4.33350E+01	2.71157E-05	0.000 %	5.44997E-05	0.000 %	7.69739E-10	-21.0937	2.00739E+00	0.9975
289	4.40979E+01	2.31661E-05	0.000 %	4.42984E-05	0.000 %	5.34375E-10	-19.2665	1.90928E+00	0.9969
294	4.48608E+01	1.97464E-05	0.000 %	3.59234E-05	0.000 %	3.69545E-10	-17.2373	1.81729E+00	0.9979
299	4.56238E+01	1.81961E-05	0.000 %	3.28917E-05	0.000 %	3.11428E-10	-16.1649	1.80355E+00	0.9955
304	4.63867E+01	1.77480E-05	0.000 %	3.31554E-05	0.000 %	3.06090E-10	-4.8799	1.86329E+00	0.9948
309	4.71497E+01	1.74423E-05	0.000 %	3.06957E-05	0.000 %	2.78852E-10	2.6493	1.75750E+00	0.9973
314	4.79126E+01	1.30012E-05	0.000 %	2.16800E-05	0.000 %	1.46113E-10	12.0755	1.55748E+00	0.9880
319	4.86755E+01	5.09204E-06	0.000 %	8.11885E-06	0.000 %	2.11111E-11	22.4775	1.36120E+00	0.9588
324	4.94385E+01	1.42197E-06	0.000 %	2.14108E-06	0.000 %	1.34704E-12	19.1370	1.27742E+00	0.7197
329	5.02014E+01	1.67711E-06	0.000 %	1.43439E-06	0.000 %	1.10673E-12	-30.3504	7.54482E-01	0.7782
334	5.09644E+01	1.32969E-06	0.000 %	1.30414E-06	0.000 %	8.62952E-13	-36.2157	9.35876E-01	0.9105
339	5.17273E+01	1.19292E-06	0.000 %	1.32128E-06	0.000 %	6.24327E-13	-72.9696	8.41236E-01	0.5769
344	5.24902E+01	8.44581E-07	0.000 %	1.24629E-06	0.000 %	4.80143E-13	-109.2251	1.29068E+00	0.7650
349	5.32532E+01	7.77501E-07	0.000 %	1.35577E-06	0.000 %	2.23963E-13	-146.1221	7.10400E-01	0.1660
354	5.40161E+01	1.44522E-06	0.000 %	1.65665E-06	0.000 %	1.01005E-12	-143.3003	9.27269E-01	0.6544
359	5.47790E+01	1.41723E-06	0.000 %	1.43565E-06	0.000 %	3.60245E-13	-188.5902	3.43913E-01	0.1153
364	5.55420E+01	1.65642E-06	0.000 %	6.19787E-07	0.000 %	1.14587E-13	-194.3906	8.00801E-02	0.0458
369	5.63049E+01	2.82731E-06	0.000 %	9.37793E-07	0.000 %	5.61704E-13	-189.5970	1.34738E-01	0.1650
374	5.70679E+01	3.87492E-06	0.000 %	7.40674E-07	0.000 %	1.00764E-12	-220.2307	1.28679E-01	0.4532
379	5.78308E+01	4.48280E-06	0.000 %	9.10924E-07	0.000 %	7.26710E-13	-238.4286	6.93414E-02	0.1164
384	5.85937E+01	5.08032E-06	0.000 %	8.36795E-07	0.000 %	4.29920E-13	-260.5203	3.19401E-02	0.0376
389	5.93567E+01	4.60837E-06	0.000 %	5.10974E-07	0.000 %	1.95370E-13	-308.3028	1.76397E-02	0.0253
394	6.01196E+01	4.18850E-06	0.000 %	9.15814E-07	0.000 %	9.14922E-13	-50.9032	9.99993E-02	0.2092
399	6.08826E+01	3.65498E-06	0.000 %	4.94538E-07	0.000 %	7.49639E-13	-61.4300	1.07026E-01	0.6257
404	6.16455E+01	3.97394E-06	0.000 %	7.18004E-07	0.000 %	1.16835E-12	-42.3671	1.41862E-01	0.6165
409	6.24084E+01	4.91742E-06	0.000 %	7.90384E-07	0.000 %	1.93779E-12	-27.8377	1.53660E-01	0.9140
414	6.31714E+01	4.55434E-06	0.000 %	8.32775E-07	0.000 %	1.91855E-12	-23.2045	1.77358E-01	0.9408
419	6.39343E+01	4.96884E-06	0.000 %	8.36794E-07	0.000 %	2.13970E-12	-10.0792	1.56178E-01	0.9737
424	6.46973E+01	4.78131E-06	0.000 %	7.99557E-07	0.000 %	1.95163E-12	-16.2202	1.53698E-01	0.9583
429	6.54602E+01	4.43043E-06	0.000 %	7.78938E-07	0.000 %	1.78048E-12	-8.1647	1.73930E-01	0.9787
434	6.62231E+01	5.56971E-06	0.000 %	1.07879E-06	0.000 %	3.08495E-12	-5.6693	1.90684E-01	0.9692
439	6.69861E+01	6.54386E-06	0.000 %	1.14182E-06	0.000 %	3.88532E-12	1.3078	1.74020E-01	0.9947
444	6.77490E+01	7.83287E-06	0.000 %	1.47545E-06	0.000 %	5.98704E-12	-2.9901	1.47112E-01	0.9867
*********	*********	0.00000E+00	0.000 %	0.00000E+00	0.000 %	*********	*********	*********	*********
*********	*********	*********	0.000 %	*********	0.000 %	*********	*********	*********	*********

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VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS
VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS
VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS

                  CCCC   III  V     V  M     M  W     W   OOO
                 C        I   V     V  MM   MM  W     W  O   O
                 C        I   V     V  M M M M  W     W  O   O
                 C        I   V     V  M     M  W     W  O   O
                 C        I   V     V  M     M  W  W  W  O   O
                 C        I    V   V   M     M  WW   WW  O   O
                  CCCC   III     V     M     M  W     W   OOO

 TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA     222222     000000    222222     000000
 TTTTTTTTTT  RRRRRRRR    NN      NN    AAAAAA     222222     000000    222222     000000
     TT      RR     RR   NN      NN  AA      AA 22      22  00    00 22      22  00    00
     TT      RR     RR   NN      NN  AA      AA 22      22  00    00 22      22  00    00
     TT      RR     RR   NNNN    NN  AA      AA         22  00  0000         22  00  0000
     TT      RR     RR   NNNN    NN  AA      AA         22  00  0000         22  00  0000
     TT      RRRRRRRR    NN  NN  NN  AA      AA       22    00 00 00       22    00 00 00
     TT      RRRRRRRR    NN  NN  NN  AA      AA       22    00 00 00       22    00 00 00
     TT      RR  RR      NN    NNNN  AAAAAAAAAA     22      0000  00     22      0000  00
     TT      RR  RR      NN    NNNN  AAAAAAAAAA     22      0000  00     22      0000  00
     TT      RR    RR    NN      NN  AA      AA   22        00    00   22        00    00    ....
     TT      RR    RR    NN      NN  AA      AA   22        00    00   22        00    00    ....
     TT      RR     RR   NN      NN  AA      AA 2222222222   000000  2222222222   000000     ....
     TT      RR     RR   NN      NN  AA      AA 2222222222   000000  2222222222   000000     ....

 LL            000000      GGGGGGGG      ;;;;      11
 LL            000000      GGGGGGGG      ;;;;      11
 LL          00      00  GG              ;;;;    1111
 LL          00      00  GG              ;;;;    1111
 LL          00      00  GG                        11
 LL          00      00  GG                        11
 LL          00      00  GG              ;;;;      11
 LL          00      00  GG              ;;;;      11
 LL          00      00  GG    GGGGGG    ;;;;      11
 LL          00      00  GG    GGGGGG    ;;;;      11
 LL          00      00  GG        GG      ;;      11
 LL          00      00  GG        GG      ;;      11
 LLLLLLLLLL    000000      GGGGGG          ;;    111111
 LLLLLLLLLL    000000      GGGGGG          ;;    111111

                  CCCC   III  V     V  M     M  W     W   OOO
                 C        I   V     V  MM   MM  W     W  O   O
                 C        I   V     V  M M M M  W     W  O   O
                 C        I   V     V  M     M  W     W  O   O
                 C        I   V     V  M     M  W  W  W  O   O
                 C        I    V   V   M     M  WW   WW  O   O
                  CCCC   III     V     M     M  W     W   OOO

VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS
VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS
VAX/VMS   CIVMWO      TRVA2020 11-DEC-1982 12:59    LPA0: 11-DEC-1982 13:05    _DRA1:[CIVMWO]TRVA2020.LOG;1    VAX/VMS
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TRNA2020.JOU

  JOB 1959 ENTERED ON QUEUE SYS$PRINT
1 PRINT/HEADER [CIVMWO.DCASS]TRNA2020.ECO
  JOB 1960 ENTERED ON QUEUE SYS$PRINT
$ PRINT/HEADER [CIVMWO.DCASS]PIL2020.TRN
  JOB 1961 ENTERED ON QUEUE SYS$PRINT
$ EXIT
  CIVMWO       JOB TERMINATED AT 11-DEC-1982 12:59:44.69

  ACCOUNTING INFORMATION:
  BUFFERED I/O COUNT:          143      PEAK WORKING SET SIZE:    394
  DIRECT I/O COUNT:           4968      PEAK VIRTUAL SIZE:       1242
  PAGE FAULTS:               14202      MOUNTED VOLUMES:            0
  ELAPSED CPU TIME:   0 00:03:34.09     ELAPSED TIME:     0 00:05:13.55
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