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DEPARTMENT OF PHYSICS AND GEOPHYSICAL SCIENCES  
SCHOOL OF SCIENCES AND HEALTH PROFESSIONS  
OLD DOMINION UNIVERSITY  
NORFOLK, VIRGINIA

Technical Report PGSTR-AP75-08

DATA SET FOR BACKGROUND INVESTIGATION OF ATMOSPHERIC  
CONSTITUENTS FOR CAPE HENRY SITE: AUGUST 5-22, 1974

(NASA-CR-147925) DATA SET FOR BACKGRCUND  
INVESTIGATION OF ATMOSPHERIC CONSTITUENTS  
FOR CAPE HENRY SITE: AUGUST 5-22 1974 (Old  
Dominion Univ. Research Foundation) 48 p HC  
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*Prepared by the*  
Old Dominion University Atmospheric Research Group  
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*Sponsored by*  
NASA Office of University Affairs  
Grant NGL 47-003-067

May 1975



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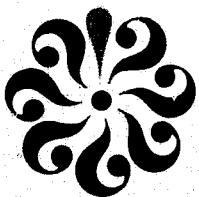
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May 1975



## 1. BACKGROUND AND PARTICULATE DATA

### 1.A. Experimental Description

This investigation was conducted at the request of the Virginia State Air Pollution Control Board, region VI director. The primary objective of the study was to provide background air quality data to the U. S. Navy and the City of Virginia Beach municipal authorities. This report includes processed and edited data.

The Old Dominion University Mobile Air Pollution Laboratory was located within the Fort Story Military Reservation at Cape Henry between 5 August and 21 August 1974. Total sulfur, total hydrocarbons, NO, NO<sub>2</sub>, NO<sub>x</sub>, and O<sub>3</sub> were monitored and reported as hourly averages. Visibility was measured using an integrating nephelometer and reported as hourly averages. Twenty-four hour averaged mass loading was determined using two high volume air samplers (Hi Vols) located on different levels (25' and 50') at the site. Additionally, temperature, wind speed, relative humidity, barometric pressure and solar radiation intensity were measured at the site or supplemented by readings taken by the U. S. Coast Guard at the Cape Henry Light House. Table 1 contains information on the monitoring methods and estimates of error for the measurements.

The Old Dominion University Mobile Air Pollution Laboratory was placed in a paved area formerly used as a military gas station. The Atlantic Ocean shore line was approximately one-half mile east of the site, the mouth of the Chesapeake Bay was approximately one mile north and Seashore State Park was approximately two miles south by southwest of the site.

**Table 1**  
**Monitoring Methods and Estimates of Error\***

Parameter	Instrument	Method	Accuracy**
NO, NO <sub>2</sub> , NO <sub>x</sub>	Bendix Model 8101B Nitrogen Oxide Monitor	Photometric detection of gas phase reaction of NO and O <sub>3</sub>	± 5%
Total Sulfur	Meloy labs Model SH 202	Flame photometric detec- tion of Hydrogen burned air sample	± 5%
Total Hydrocarbons	Meloy labs Model SH 202	Flame ionization detec- tion of burned air sampler	± 5%
O <sub>3</sub>	ODU construction RR III-6	Chemiluminescence of O <sub>3</sub> Ethylene reaction	± 10%
CO	Andros DIF Model 7000	Nondispersion infrared	± 5%
Visibility	Meteorology Research Inc. Model 1550 Inte- grated Nephelometer with part 461 air heater assembly	Light scattering	± 5%
Solar Radiation	Eppley labs Model 8-48 pyronometer	Differential heating	± 2%
Temperature	ODU construction	Thermistor resistance	± 0.3°C
Wind Speed	Climet Model 011-2B	Direct measurement	± 2 mph
Wind Direction	Climet Model 012-2C	Direct measurement	± 5°
Humidity	Relative humidity detector#	Hair stretching	± 5%
Barometric Pressure	Microbarometer#	#	± 1%

\* All instruments calibrated as suggested in Federal Register Oct. 13, 1973

\*\* 67 percentile confidence level (estimated from calibrations)

# Manufacturer information unavailable at this time

There is no major industrial site in the vicinity (radius of 5 miles) and the only road of importance is Route 60 which is an east/west throughfare approximately one and one-half miles south of the site.

#### 1.B. Particulate Data

On August 4, two pre-calibrated High Volume Air Samplers were placed at the trailer site. Sampler number 1 was set at the 15 foot level, and sampler number 2 was set at the 25 foot level:

The samples were obtained on a 24 hour basis (12 am to 12 pm EDT). In Table 2, data entered for a given day represents the average of the previous 24 hours. The methods used are reported in *Methods of Air Sampling and Analysis*, Intersociety Committee and in the Federal Register, Vol. 36, No. 84, p. 8193 - 8194 (April 30, 1971).

The particulate samples were transported to Old Dominion where they were dried and weighed. The weight, run time, sampling rate (air flow) were then treated mathematically into the meaningful concentration units ( $\mu\text{g}/\text{m}^3$ ) as presented in Table 2.

#### 2. DIGITIZED MOLECULAR AND SITE METEOROLOGICAL DATA

This section contains two types of data: Molecular and meteorological. The molecular concentrations are nitric oxide, nitrogen dioxide, ozone, total sulfur, total hydrocarbons and carbon monoxide. Each of these molecular concentrations were measured at the 15 foot and 50 foot levels, respectively.

The meteorological data provides readings of beta-scattering (B-SC), visibility (VSB), solar radiation (SRAD), relative humidity (RH), wind speed (WSPD), wind direction (WDIR) and temperature (T).

**Table 2**  
**Mass Loading ( $\mu\text{g}/\text{m}^3$ ) for Cape Henry Site\***

Date	Site 1	Site 2
Aug 6	25	35
7	28	35
8	23	28
9	13	11
10	57	76
11	53	62
12	28	33
13	50	60
14	53	64
15	39	48
16	19	25
17	36	47
18	**	**
19	41	51
20	56	60

\* Refer to Figure 1 for site locations  
 \*\* Missing Data

The tabulated data for the zero hour is an average of the recorded readings from 00:00 to 00:59 EST. The data set for each hour thereafter is tabulated correspondingly.

Throughout the data array the numbers, -1, -2, -3, -4, -5, -9 are used as indicators of the following data conditions: -1 represents a reading below scale, -2 represents a missing reading, -3 represents a reading off scale, -4 represents a reading that was negatively past the noise level, -5 represents edited data, and -9 represents missing data cards.

The molecular data concentrations are reported in parts per billion, while the meteorological data are reported individually as follows:

Meteorological Data	Unit
B-SC	Inverse Megameters
VSB	Kilometers
SRAD	Calories per Square Centimeters per minute
RH	Percent
WSPD	Miles Per Hour
WDIR	Degrees North
T-15	Degrees Centigrade
T-25	Degrees Centigrade

The wind direction was reported as a -2 on the computer printout because this information was not determined by a wind direction detector in the trailer. Table 3 reports the wind direction as a sixteen point compass. This information was supplied by the U. S. Coast Guard at Cape Henry Light House.

The data for CO and HC are not included on the computer printout because field installation and maintenance were not properly carried out; accordingly, unreliable data was produced.

On August 18th and thereafter the data for O<sub>3</sub> was also removed, because thunderstorms on the evening of the 17th could have been responsible for the disturbance in that set of data.

**Table 3**  
**Wind Direction**  
**U. S. Coast Guard at Cape Henry Light House\***

<b>Date</b>	<b>Three-Hour Readings</b>								
	<b>0200</b>	<b>0500</b>	<b>0800</b>	<b>1100</b>	<b>1400</b>	<b>1700</b>	<b>2000</b>	<b>2300</b>	
Aug 5	SSW	SSW	SW	S	S	ENE	SSE	S	
6	S	S	ESE	ENE	ENE	NNE	NE	ENE	
7	SE	SSE	S	SW	WSW	NNW	NW	NW	
8	SW	WSW	SW	W	SE	SE	SSE	S	
9	W	SSE	SSE	E	E	SSE	SSE	S	
10	W	E	N	N	NNE	NNE	NNE	N	
11	NNE	NNE	N	N	N	N	NNE	NNE	
12	NE	NW	N	NE	N	NE	ESE	SSE	
13	S	S	SSE	WSW	NW	NW	SE	S	
14	SW	SW	SW	SSW	E	SE	SSW	S	
15	SSW	SW	SW	NW	NNW	ENE	E	SE	
16	SE	S	SSW	NE	NE	SE	SE	SE	
17	SE	SE	SW	S	SSE	S	S	WSW	
18	SSE	SW	SW	N	NNE	ENE	ENE	SSE	
19	ESE	ENE	ENE	ENE	NE	NE	NE	NE	
20	NE	NE	NE	NNE	NNE	NE	NE	NE	
21	NNE	NNE	NE	ENE	NE	NE	NE	NE	

\* Approximately 1/4 mi. from the site.

### 3. GRAPHIC REPRESENTATION OF MOLECULAR DATA

In this section, the Cape Henry data is presented in a line-printer simulation of a multi-channel strip chart. Each day's data is represented on one page with two lines containing the data for each hour as designated at the left end of each line. To the right of each printed hour, a vertical fiducial mark and an asterisk form a vertical left margin for the graphic area.

Vertical fiducials to the right of this margin were spaced at one-inch intervals on the original computer printout, however this interval is actually smaller on these pages through photo reduction. In the following description, these intervals will be spoken of as "inches" in keeping with the scale factors printed at the bottom of each page.

The first "inch" from the margin will normally contain the letter A in the lower line for each hour, representing the presence of NO at the lower level of 15 feet, while the letter B in the upper line represents its concentration at the higher level, 50 feet. As indicated by the scale factor printed at the base of the chart, the first inch from the left represents concentration in the range from 0 to 50 parts per billion. For very low concentration measured, the left fiducial may be replaced by the letter. For an indication of data missing, the letter is replaced by an asterisk which is plotted in the position of 01 concentration.

The second "inch" is the range for the letters C and D, representing concentration of NO<sub>2</sub> at the same levels, and for the same range of concentration. In the third "inch", the letters E and F represent a plot of the sum of the measurements of NO and NO<sub>2</sub>.

In the fourth through the seventh "inches", each pair of letters represents concentration of another constituent, though the concentration

represented by a one "inch" displacement is higher for these constituents as indicated by the printed scale factors.

As illustrated perhaps most often by the hydrocarbons, K, L, the concentration is permitted to traverse a second "inch" at the same scale factor. At that point it is limited, so that a "two inch" displacement would represent a concentration of twice the scale printed factor, or more.

As indicated by the legend at the bottom of each page, the various other data observed are represented by additional letter pairs, the lower legend of abbreviation and scale factor applying to the first or lower factor applying to the second letter printed in the upper line for each hour. Thus the final two inches are the range for the letters U and V, which represent temperature at 15 and 50 feet, and cover the range from 0 to 40 degrees C.

Two notes may be of help in interpreting these graphics. First, the units to which the printed scale factors apply are identical to the units shown for the numerical listings in the digitized printout of the section.

Second, should two letters properly occupy the same position, precedence or priority is given in alphabetical order, the second letter of the two being displaced one position toward the right. Thus if the letter R immediately follows the letter P, it is possible that the R belonged in the position occupied by the letter P. On the other hand, if they are adjacent in the order RP, there is no ambiguity.

The tabular description of letters and scales is given below:

NO (A at 15 ft) 1 "inch" represents 50 ppb  
(B at 50 ft)

NO<sub>2</sub> (C at 15 ft) 1 "inch" represents 50 ppb  
(D at 50 ft)

NO<sub>x</sub> (E at 15 ft) 1 "inch" represents 50 ppb  
(F at 50 ft)

Ozone	(G at 15 ft) (H at 50 ft)	1 "inch" represents 100 ppb
Sulfur	(I at 15 ft) (J at 50 ft)	1 "inch" represents 100 ppb
Hydrocarbons	(K at 15 ft) (L at 50 ft)	1 "inch" represents 5000 ppb
CO	(M at 15 ft) (N at 50 ft)	1 "inch" represents 5000 ppb
Beta Scattering	O	1 "inch" represents 400/megameter
Visibility (inferred from B scattering)	P	1 "inch" represents 30 km
Solar Radiation	Q	1 "inch" represents 1.5 cal/sq cm/minute
Relative Humidity	R	1 "inch" represents 100%
Wind Speed	S	1 "inch" represents 20 mph
Wind Direction	T	1 "inch" represents 360 degrees
Temperature	(U at 15 ft) (V at 50 ft)	1 "inch" represents 20 degrees C

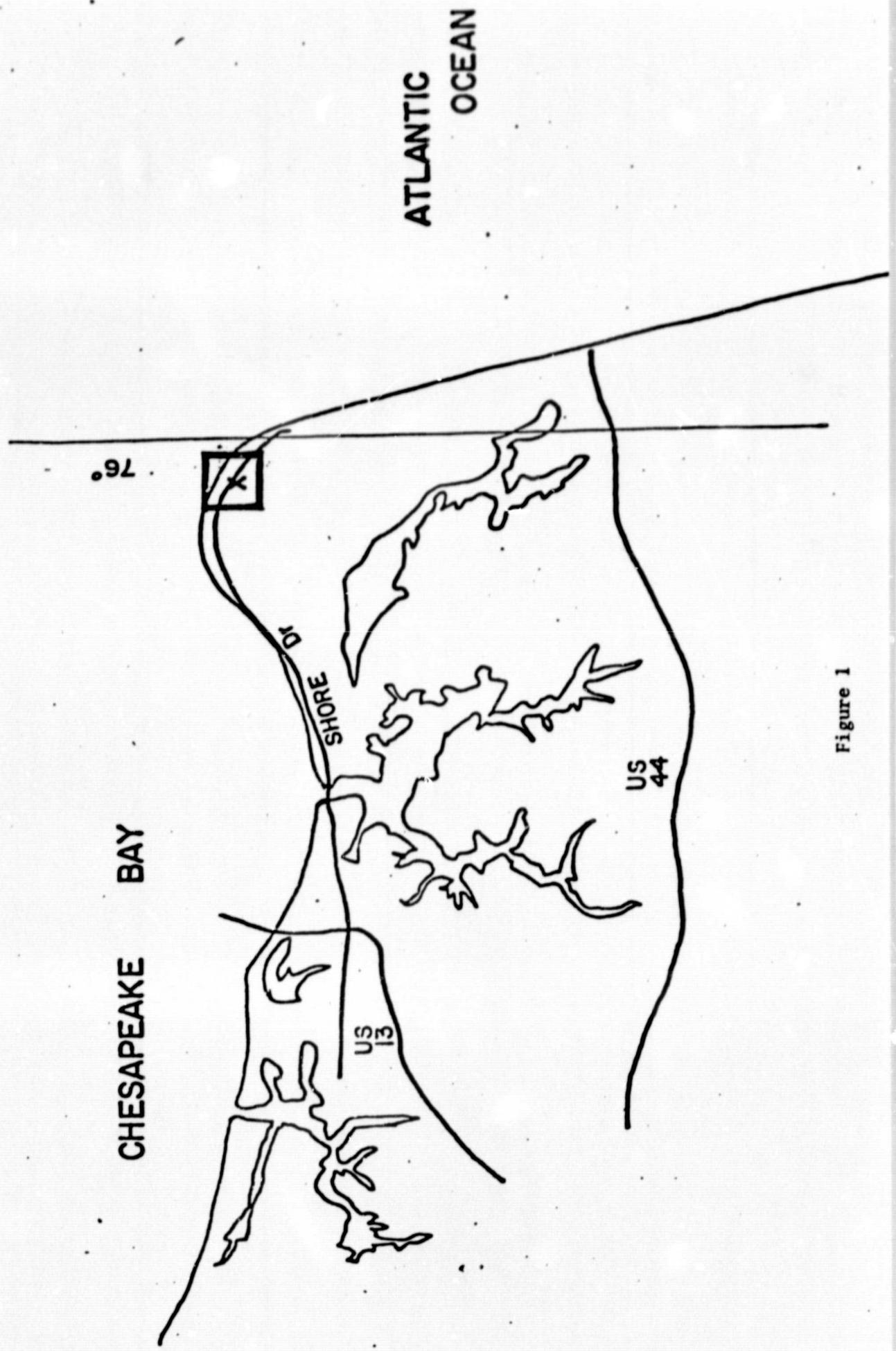


Figure 1

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ก.ส.ส. / SCALES / SQUARES CHAPIN

พิจิตรา / THE GATEWAY TO CHONBURI

MEGAHÉROS / MEGAHÉROS



סמלים / מנגנונים / מושגים

• 401 / MEGAMETERS  
• 601 / SQUARE CHAMIN

MEGAMETERS  
SOCAL/EARTHQUAKE CHANNEL

ORIGINAL PAGE IS  
OF POOR QUALITY

សំណង់សារ និងសំណង់សារ និងសំណង់សារ

POLYMER LETTERS



พัฒนาชุมชน  
จังหวัดเชียงใหม่/๑๐๘



MEGA TEN'S  
SACAI / SUYAKE CHUNIN

-----PARTS PER BILLION-----  
NO NO<sub>2</sub> N<sub>2</sub>O<sub>5</sub> NH<sub>3</sub> CO SO<sub>2</sub> S<sub>2</sub> HCl HClO<sub>4</sub> H<sub>2</sub>S<sub>2</sub>O<sub>8</sub> S<sub>2</sub>O<sub>4</sub>  
NO<sub>2</sub> NO<sub>3</sub> N<sub>2</sub>O<sub>3</sub> NH<sub>4</sub><sup>+</sup> CO<sub>2</sub> SO<sub>3</sub> S<sub>2</sub>O<sub>3</sub><sup>2-</sup> H<sub>2</sub>S<sub>2</sub>O<sub>7</sub><sup>2-</sup> H<sub>2</sub>S<sub>2</sub>O<sub>8</sub><sup>2-</sup>

1000 MEGABITERS  
1000 GIGABYTE CH-MIN

GDP IN MILLION RUPEES		GDP PER CAPITA		GDP PER CAPITA IN MILLION RUPEES	
Year	GDP	Population	GDP	Population	GDP
2000	117	117	117	117	117
2001	119	119	119	119	119
2002	121	121	121	121	121
2003	124	124	124	124	124
2004	127	127	127	127	127
2005	130	130	130	130	130
2006	133	133	133	133	133
2007	136	136	136	136	136
2008	139	139	139	139	139
2009	142	142	142	142	142
2010	145	145	145	145	145
2011	148	148	148	148	148
2012	151	151	151	151	151
2013	154	154	154	154	154
2014	157	157	157	157	157
2015	160	160	160	160	160
2016	163	163	163	163	163
2017	166	166	166	166	166
2018	169	169	169	169	169
2019	172	172	172	172	172
2020	175	175	175	175	175
2021	178	178	178	178	178
2022	181	181	181	181	181
2023	184	184	184	184	184
2024	187	187	187	187	187
2025	190	190	190	190	190
2026	193	193	193	193	193
2027	196	196	196	196	196
2028	199	199	199	199	199
2029	202	202	202	202	202
2030	205	205	205	205	205
2031	208	208	208	208	208
2032	211	211	211	211	211
2033	214	214	214	214	214
2034	217	217	217	217	217
2035	220	220	220	220	220
2036	223	223	223	223	223
2037	226	226	226	226	226
2038	229	229	229	229	229
2039	232	232	232	232	232
2040	235	235	235	235	235
2041	238	238	238	238	238
2042	241	241	241	241	241
2043	244	244	244	244	244
2044	247	247	247	247	247
2045	250	250	250	250	250
2046	253	253	253	253	253
2047	256	256	256	256	256
2048	259	259	259	259	259
2049	262	262	262	262	262
2050	265	265	265	265	265
2051	268	268	268	268	268
2052	271	271	271	271	271
2053	274	274	274	274	274
2054	277	277	277	277	277
2055	280	280	280	280	280
2056	283	283	283	283	283
2057	286	286	286	286	286
2058	289	289	289	289	289
2059	292	292	292	292	292
2060	295	295	295	295	295
2061	298	298	298	298	298
2062	301	301	301	301	301
2063	304	304	304	304	304
2064	307	307	307	307	307
2065	310	310	310	310	310
2066	313	313	313	313	313
2067	316	316	316	316	316
2068	319	319	319	319	319
2069	322	322	322	322	322
2070	325	325	325	325	325
2071	328	328	328	328	328
2072	331	331	331	331	331
2073	334	334	334	334	334
2074	337	337	337	337	337
2075	340	340	340	340	340
2076	343	343	343	343	343
2077	346	346	346	346	346
2078	349	349	349	349	349
2079	352	352	352	352	352
2080	355	355	355	355	355
2081	358	358	358	358	358
2082	361	361	361	361	361
2083	364	364	364	364	364
2084	367	367	367	367	367
2085	370	370	370	370	370
2086	373	373	373	373	373
2087	376	376	376	376	376
2088	379	379	379	379	379
2089	382	382	382	382	382
2090	385	385	385	385	385
2091	388	388	388	388	388
2092	391	391	391	391	391
2093	394	394	394	394	394
2094	397	397	397	397	397
2095	400	400	400	400	400
2096	403	403	403	403	403
2097	406	406	406	406	406
2098	409	409	409	409	409
2099	412	412	412	412	412
2100	415	415	415	415	415
2101	418	418	418	418	418
2102	421	421	421	421	421
2103	424	424	424	424	424
2104	427	427	427	427	427
2105	430	430	430	430	430
2106	433	433	433	433	433
2107	436	436	436	436	436
2108	439	439	439	439	439
2109	442	442	442	442	442
2110	445	445	445	445	445
2111	448	448	448	448	448
2112	451	451	451	451	451
2113	454	454	454	454	454
2114	457	457	457	457	457
2115	460	460	460	460	460
2116	463	463	463	463	463
2117	466	466	466	466	466
2118	469	469	469	469	469
2119	472	472	472	472	472
2120	475	475	475	475	475
2121	478	478	478	478	478
2122	481	481	481	481	481
2123	484	484	484	484	484
2124	487	487	487	487	487
2125	490	490	490	490	490
2126	493	493	493	493	493
2127	496	496	496	496	496
2128	499	499	499	499	499
2129	502	502	502	502	502
2130	505	505	505	505	505
2131	508	508	508	508	508
2132	511	511	511	511	511
2133	514	514	514	514	514
2134	517	517	517	517	517
2135	520	520	520	520	520
2136	523	523	523	523	523
2137	526	526	526	526	526
2138	529	529	529	529	529
2139	532	532	532	532	532
2140	535	535	535	535	535
2141	538	538	538	538	538
2142	541	541	541	541	541
2143	544	544	544	544	544
2144	547	547	547	547	547
2145	550	550	550	550	550
2146	553	553	553	553	553
2147	556	556	556	556	556
2148	559	559	559	559	559
2149	562	562	562	562	562
2150	565	565	565	565	565
2151	568	568	568	568	568
2152	571	571	571	571	571
2153	574	574	574	574	574
2154	577	577	577	577	577
2155	580	580	580	580	580
2156	583	583	583	583	583
2157	586	586	586	586	586
2158	589	589	589	589	589
2159	592	592	592	592	592
2160	595	595	595	595	595
2161	598	598	598	598	598
2162	601	601	601	601	601
2163	604	604	604	604	604
2164	607	607	607	607	607
2165	610	610	610	610	610
2166	613	613	613	613	613
2167	616	616	616	616	616
2168	619	619	619	619	619
2169	622	622	622	622	622
2170	625	625	625	625	625
2171	628	628	628	628	628
2172	631	631	631	631	631
2173	634	634	634	634	634
2174	637	637	637	637	637
2175	640	640	640	640	640
2176	643	643	643	643	643
2177	646	646	646	646	646
2178	649	649	649	649	649
2179	652	652	652	652	652
2180	655	655	655	655	655
2181	658	658	658	658	658
2182	661	661	661	661	661
2183	664	664	664	664	664
2184	667	667	667	667	667
2185	670	670	670	670	670
2186	673	673	673	673	673
2187	676	676	676	676	676
2188	679	679	679	679	679
2189	682	682	682	682	682
2190	685	685	685	685	685
2191	688	688	688	688	688
2192	691	691	691	691	691
2193	694	694	694	694	694
2194	697	697	697	697	697
2195	700	700	700	700	700
2196	703	703	703	703	703
2197	706	706	706	706	706
2198	709	709	709	709	709
2199	712	712	712	712	712
2200	715	715	715	715	715
2201	718	718	718	718	718
2202	721	721	721	721	721
2203	724	724	724	724	724
2204	727	727	727	727	727
2205	730	730	730	730	730
2206	733	733	733	733	733
2207	736	736	736	736	736
2208	739	739	739	739	739
2209	742	742	742	742	742
2210	745	745	745	745	745
2211	748	748	748	748	748
2212	751	751	751	751	751
2213	754	754	754	754	754
2214	757	757	757	757	757
2215	760	760	760	760	760
2216	763	763	763	763	763
2217	766	766	766	766	766
2218	769	769	769	769	769
2219	772	772	772	772	772
2220	775	775	775	775	775
2221	778	778	778	778	778
2222	781	781	781	781	781
2223	784	784	784	784	784
2224	787	787	787	787	787
2225					

THE VAHE / 500 SQUARE CH-MIN

NAME	NUMBER	PANTS PER GALLON									
		NSPD	MDLR	T-75	APN	N	HC	CO	G-SC	V-SC	SKAD
0	7 - 7	6	6	-5	16	16	-5	-5	182	21	0,02
1	6 - 6	7	7	-5	16	16	-5	-5	161	24	0,02
2	6 - 6	7	7	-5	17	16	-5	-5	172	23	0,02
3	7 - 7	7	7	-5	16	16	-5	-5	171	23	0,02
4	7 - 7	7	7	-5	16	16	-5	-5	151	26	0,02
5	7 - 7	7	7	-5	16	16	-5	-5	126	31	0,07
6	7 - 7	7	7	-5	16	16	-5	-5	90	43	0,18
7	7 - 7	7	7	-5	16	16	-5	-5	82	48	0,50
8	7 - 7	7	7	-5	16	16	-5	-5	63	62	0,51
9	7 - 7	7	7	-5	16	16	-5	-5	73	54	0,52
10	7 - 7	7	7	-5	16	16	-5	-5	70	51	0,66
11	7 - 7	7	7	-5	16	16	-5	-5	64	61	1,00
12	7 - 7	7	7	-5	16	16	-5	-5	70	56	1,00
13	7 - 7	7	7	-5	16	16	-5	-5	64	61	0,97
14	7 - 7	7	7	-5	16	16	-5	-5	64	61	0,63
15	7 - 7	7	7	-5	16	16	-5	-5	51	52	0,52
16	7 - 7	7	7	-5	16	16	-5	-5	66	24	0,39
17	7 - 7	7	7	-5	16	16	-5	-5	175	22	0,10
18	7 - 7	7	7	-5	16	16	-5	-5	161	22	0,03
19	7 - 7	7	7	-5	16	16	-5	-5	171	23	0,01
20	7 - 7	7	7	-5	16	16	-5	-5	166	27	0,01
21	7 - 7	7	7	-5	16	16	-5	-5	161	28	0,01
22	7 - 7	7	7	-5	16	16	-5	-5	169	26	0,01
23	7 - 7	7	7	-5	16	16	-5	-5	166	27	0,01
24	7 - 7	7	7	-5	16	16	-5	-5	161	28	0,01
25	7 - 7	7	7	-5	16	16	-5	-5	169	26	0,01

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D D D D D D D D D D D D D D D D  
E E E E E E E E E E E E E E E E  
S U F U A S U F U A S U F U A S U F U A  
C O D S U L F U R C O D S U L F U R C O D S U L F U R C O D S U L F U R  
H Y D R O C A B 30000.00 50000.00 1000.00 30000.00 50000.00 1000.00 30000.00 50000.00  
V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S V I S  
R E F H U M M N D - D I M T E M P T E M P  
S O L R A D M N D S P D T E M P T E M P  
1.50 20.00 20.00 20.00 20.00 20.00 20.00 20.00



the first time in the history of the world, the people of the United States have been compelled to go to war in defense of their country.

Figure 1. A photograph of the experimental setup showing the two sets of 10 cylindrical samples used in the study.

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10  
100-1000

Figure 1. A composite of the 1999–2000 winter snowpack depth (cm) for the Colorado River basin. The basin is divided into four major subwatersheds: Colorado, Gunnison, Arkansas, and Yampa.

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NOX  
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SULFUR SULFUR SULFUR SULFUR SULFUR SULFUR SULFUR SULFUR  
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HYD-CAB HYD-CAB HYD-CAB HYD-CAB HYD-CAB HYD-CAB HYD-CAB  
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VISIR  
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SOL RAD  
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WND-SPD WND-SPD WND-SPD WND-SPD WND-SPD WND-SPD WND-SPD  
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TEMP TEMP TEMP TEMP TEMP TEMP TEMP TEMP  
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1 INCH = 30.00 1 INCH = 30.00



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S  
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Sulfur NOx CO Ozone H2O-CNB H2O-CNB H2O-CNB H2O-CNB  
0.00 100.00 1000.00 3000.00 10000.00 30000.00 100000.00 300000.00  
NOX 2CN 2CN 2CN 2CN 2CN 2CN 2CN  
0.00 100.00 1000.00 3000.00 10000.00 30000.00 100000.00 300000.00  
DIN DIN DIN DIN DIN DIN DIN DIN  
0.00 20.00 20.00 20.00 20.00 20.00 20.00 20.00  
TEMP TEMP TEMP TEMP TEMP TEMP TEMP  
20.00 20.00 20.00 20.00 20.00 20.00 20.00 20.00  
WHD-DIR WHD-DIR WHD-DIR WHD-DIR WHD-DIR WHD-DIR WHD-DIR WHD-DIR  
0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00  
REL HUM  
20.00 30.00 40.00 50.00 60.00 70.00 80.00 90.00  
VISBY VISBY VISBY VISBY VISBY VISBY VISBY VISBY  
0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00  
8-SCAT 8-SCAT 8-SCAT 8-SCAT 8-SCAT 8-SCAT 8-SCAT 8-SCAT  
0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00  
SOL RAD  
0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00  
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10. The following table gives the number of hours worked by each of the 100 workers in the factory.

**DEPARTAMENTO DE INVESTIGACIONES**

A decorative horizontal border consisting of a repeating pattern of small black circles and thin horizontal lines.



CAPE HENRY • AUG 12 1974

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A musical score page featuring five staves of music. The top staff consists of vertical stems with small circles at the top. The second staff has horizontal stems with small circles. The third staff has vertical stems with small circles. The fourth staff has horizontal stems with small circles. The bottom staff has vertical stems with small circles. There are no clefs or key signatures present.

**בְּכָל־כְּתָבָהָרֶב כְּתָבָהָרֶב כְּתָבָהָרֶב**



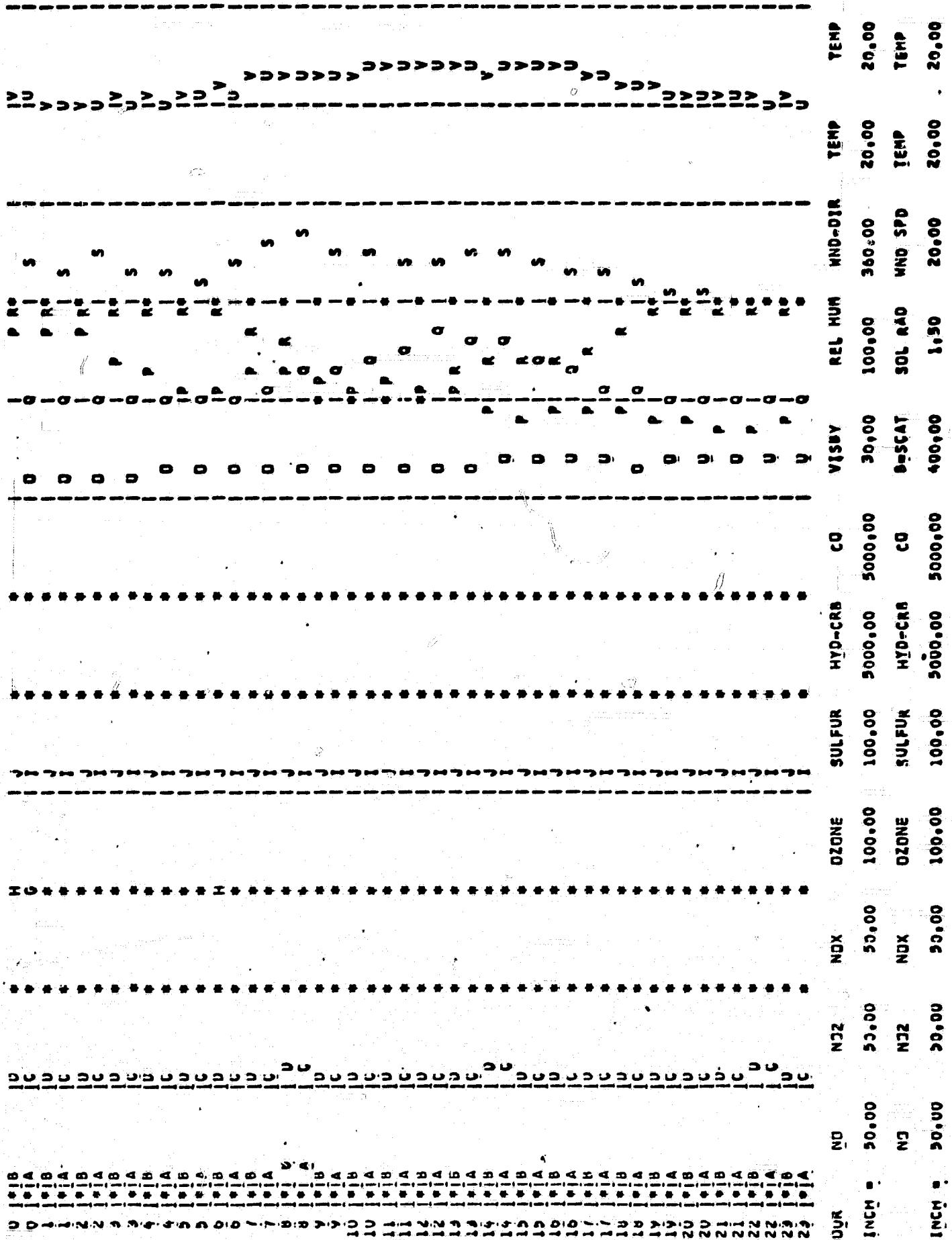




**INCH 8**

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CAPE HENRY - AUG 18 1974



TEMP TEMP  
WIND-DIR WIND-SPD  
REL HUM SOL RAD  
H2O-CRS CO 85%AT 1.50  
SULFUR SULFUR 400100 30000.00  
OZONE OZONE 100.00 30000.00  
NO NO 50.00 30000.00  
NO<sub>2</sub> NO<sub>2</sub> 50.00 30000.00  
CO CO 50.00 30000.00  
CH<sub>4</sub> CH<sub>4</sub> 50.00 30000.00  
C<sub>2</sub>H<sub>6</sub> C<sub>2</sub>H<sub>6</sub> 50.00 30000.00  
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C<sub>131</sub>H<sub>264</sub> C<sub>131</sub>H<sub>264</sub> 50.00 30000.00  
C<sub>132</sub>H<sub>266</sub> C<sub>132</sub>H<sub>266</sub> 50.00 30000.00  
C<sub>133</sub>H<sub>268</sub> C<sub>133</sub>H<sub>268</sub> 50.00 30000.00  
C<sub>134</sub>H<sub>270</sub> C<sub>134</sub>H<sub>270</sub> 50.00 30000.00  
C<sub>135</sub>H<sub>272</sub> C<sub>135</sub>H<sub>272</sub> 50.00 30000.00  
C<sub>136</sub>H<sub>274</sub> C<sub>136</sub>H<sub>274</sub> 50.00 30000.00  
C<sub>137</sub>H<sub>276</sub> C<sub>137</sub>H<sub>276</sub> 50.00 30000.00  
C<sub>138</sub>H<sub>278</sub> C<sub>138</sub>H<sub>278</sub> 50.00 30000.00  
C<sub>139</sub>H<sub>280</sub> C<sub>139</sub>H<sub>280</sub> 50.00 30000.00  
C<sub>140</sub>H<sub>282</sub> C<sub>140</sub>H<sub>282</sub> 50.00 30000.00  
C<sub>141</sub>H<sub>284</sub> C<sub>141</sub>H<sub>284</sub> 50.00 30000.00  
C<sub>142</sub>H<sub>286</sub> C<sub>142</sub>H<sub>286</sub> 50.00 30000.00  
C<sub>143</sub>H<sub>288</sub> C<sub>143</sub>H<sub>288</sub> 50.00 30000.00  
C<sub>144</sub>H<sub>290</sub> C<sub>144</sub>H<sub>290</sub> 50.00 30000.00  
C<sub>145</sub>H<sub>292</sub> C<sub>145</sub>H<sub>292</sub> 50.00 30000.00  
C<sub>146</sub>H<sub>294</sub> C<sub>146</sub>H<sub>294</sub> 50.00 30000.00  
C<sub>147</sub>H<sub>296</sub> C<sub>147</sub>H<sub>296</sub> 50.00 30000.00  
C<sub>148</sub>H<sub>298</sub> C<sub>148</sub>H<sub>298</sub> 50.00 30000.00  
C<sub>149</sub>H<sub>300</sub> C<sub>149</sub>H<sub>300</sub> 50.00 30000.00  
C<sub>150</sub>H<sub>302</sub> C<sub>150</sub>H<sub>302</sub> 50.00 30000.00  
C<sub>151</sub>H<sub>304</sub> C<sub>151</sub>H<sub>304</sub> 50.00 30000.00  
C<sub>152</sub>H<sub>306</sub> C<sub>152</sub>H<sub>306</sub> 50.00 30000.00  
C<sub>153</sub>H<sub>308</sub> C<sub>153</sub>H<sub>308</sub> 50.00 30000.00  
C<sub>154</sub>H<sub>310</sub> C<sub>154</sub>H<sub>310</sub> 50.00 30000.00  
C<sub>155</sub>H<sub>312</sub> C<sub>155</sub>H<sub>312</sub> 50.00 30000.00  
C<sub>156</sub>H<sub>314</sub> C<sub>156</sub>H<sub>314</sub> 50.00 30000.00  
C<sub>157</sub>H<sub>316</sub> C<sub>157</sub>H<sub>316</sub> 50.00 30000.00  
C<sub>158</sub>H<sub>318</sub> C<sub>158</sub>H<sub>318</sub> 50.00 30000.00  
C<sub>159</sub>H<sub>320</sub> C<sub>159</sub>H<sub>320</sub> 50.00 30000.00  
C<sub>160</sub>H<sub>322</sub> C<sub>160</sub>H<sub>322</sub> 50.00 30000.00  
C<sub>161</sub>H<sub>324</sub> C<sub>161</sub>H<sub>324</sub> 50.00 30000.00  
C<sub>162</sub>H<sub>326</sub> C<sub>162</sub>H<sub>326</sub> 50.00 30000.00  
C<sub>163</sub>H<sub>328</sub> C<sub>163</sub>H<sub>328</sub> 50.00 30000.00  
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C<sub>166</sub>H<sub>334</sub> C<sub>166</sub>H<sub>334</sub> 50.00 30000.00  
C<sub>167</sub>H<sub>336</sub> C<sub>167</sub>H<sub>336</sub> 50.00 30000.00  
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C<sub>170</sub>H<sub>342</sub> C<sub>170</sub>H<sub>342</sub> 50.00 30000.00  
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C<sub>172</sub>H<sub>346</sub> C<sub>172</sub>H<sub>346</sub> 50.00 30000.00  
C<sub>173</sub>H<sub>348</sub> C<sub>173</sub>H<sub>348</sub> 50.00 30000.00  
C<sub>174</sub>H<sub>350</sub> C<sub>174</sub>H<sub>350</sub> 50.00 30000.00  
C<sub>175</sub>H<sub>352</sub> C<sub>175</sub>H<sub>352</sub> 50.00 30000.00  
C<sub>176</sub>H<sub>354</sub> C<sub>176</sub>H<sub>354</sub> 50.00 30000.00  
C<sub>177</sub>H<sub>356</sub> C<sub>177</sub>H<sub>356</sub> 50.00 30000.00  
C<sub>178</sub>H<sub>358</sub> C<sub>178</sub>H<sub>358</sub> 50.00 30000.00  
C<sub>179</sub>H<sub>360</sub> C<sub>179</sub>H<sub>360</sub> 50.00 30000.00  
C<sub>180</sub>H<sub>362</sub> C<sub>180</sub>H<sub>362</sub> 50.00 30000.00  
C<sub>181</sub>H<sub>364</sub> C<sub>181</sub>H<sub>364</sub> 50.00 30000.00  
C<sub>182</sub>H<sub>366</sub> C<sub>182</sub>H<sub>366</sub> 50.00 30000.00  
C<sub>183</sub>H<sub>368</sub> C<sub>183</sub>H<sub>368</sub> 50.00 30000.00  
C<sub>184</sub>H<sub>370</sub> C<sub>184</sub>H<sub>370</sub> 50.00 30000.00  
C<sub>185</sub>H<sub>372</sub> C<sub>185</sub>H<sub>372</sub> 50.00 30000.00  
C<sub>186</sub>H<sub>374</sub> C<sub>186</sub>H<sub>374</sub> 50.00 30000.00  
C<sub>187</sub>H<sub>376</sub> C<sub>187</sub>H<sub>376</sub> 50.00 30000.00  
C<sub>188</sub>H<sub>378</sub> C<sub>188</sub>H<sub>378</sub> 50.00 30000.00  
C<sub>189</sub>H<sub>380</sub> C<sub>189</sub>H<sub>380</sub> 50.00 30000.00  
C<sub>190</sub>H<sub>382</sub> C<sub>190</sub>H<sub>382</sub> 50.00 30000.00  
C<sub>191</sub>H<sub>384</sub> C<sub>191</sub>H<sub>384</sub> 50.00 30000.00  
C<sub>192</sub>H<sub>386</sub> C<sub>192</sub>H<sub>386</sub> 50.00 30000.00  
C<sub>193</sub>H<sub>388</sub> C<sub>193</sub>H<sub>388</sub> 50.00 30000.00  
C<sub>194</sub>H<sub>390</sub> C<sub>194</sub>H<sub>390</sub> 50.00 30000.00  
C<sub>195</sub>H<sub>392</sub> C<sub>195</sub>H<sub>392</sub> 50.00 30000.00  
C<sub>196</sub>H<sub>394</sub> C<sub>196</sub>H<sub>394</sub> 50.00 30000.00  
C<sub>197</sub>H<sub>396</sub> C<sub>197</sub>H<sub>396</sub> 50.00 30000.00  
C<sub>198</sub>H<sub>398</sub> C<sub>198</sub>H<sub>398</sub> 50.00 30000.00  
C<sub>199</sub>H<sub>400</sub> C<sub>199</sub>H<sub>400</sub> 50.00 30000.00  
C<sub>200</sub>H<sub>402</sub> C<sub>200</sub>H<sub>402</sub> 50.00 30000.00  
C<sub>201</sub>H<sub>404</sub> C<sub>201</sub>H<sub>404</sub> 50.00 30000.00  
C<sub>202</sub>H<sub>406</sub> C<sub>202</sub>H<sub>406</sub> 50.00 30000.00  
C<sub>203</sub>H<sub>408</sub> C<sub>203</sub>H<sub>408</sub> 50.00 30000.00  
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C<sub>205</sub>H<sub>412</sub> C<sub>205</sub>H<sub>412</sub> 50.00 30000.00  
C<sub>206</sub>H<sub>414</sub> C<sub>206</sub>H<sub>414</sub> 50.00 30000.00  
C<sub>207</sub>H<sub>416</sub> C<sub>207</sub>H<sub>416</sub> 50.00 30000.00  
C<sub>208</sub>H<sub>418</sub> C<sub>208</sub>H<sub>418</sub> 50.00 30000.00  
C<sub>209</sub>H<sub>420</sub> C<sub>209</sub>H<sub>420</sub> 50.00 30000.00  
C<sub>210</sub>H<sub>422</sub> C<sub>210</sub>H<sub>422</sub> 50.00 30000.00  
C<sub>211</sub>H<sub>424</sub> C<sub>211</sub>H<sub>424</sub> 50.00 30000.00  
C<sub>212</sub>H<sub>426</sub> C<sub>212</sub>H<sub>426</sub> 50.00 30000.00  
C<sub>213</sub>H<sub>428</sub> C<sub>213</sub>H<sub>428</sub> 50.00 30000.00  
C<sub>214</sub>H<sub>430</sub> C<sub>214</sub>H<sub>430</sub> 50.00 30000.00  
C<sub>215</sub>H<sub>432</sub> C<sub>215</sub>H<sub>432</sub> 50.00 30000.00  
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C<sub>217</sub>H<sub>436</sub> C<sub>217</sub>H<sub>436</sub> 50.00 30000.00  
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C<sub>226</sub>H<sub>454</sub> C<sub>226</sub>H<sub>454</sub> 50.00 30000.00  
C<sub>227</sub>H<sub>456</sub> C<sub>227</sub>H<sub>456</sub> 50.00 30000.00  
C<sub>228</sub>H<sub>458</sub> C<sub>228</sub>H<sub>458</sub> 50.00 30

This image shows a horizontal strip of ancient Hebrew manuscript, likely from a scroll or tablet. It consists of two columns of text. The top row of characters is primarily square in shape, while the bottom row is primarily circular. The script is a form of Hebrew used in the Dead Sea Scrolls, specifically the Qumran Cursive script. The text is written in a right-to-left direction.

A horizontal dashed line with black 'S' marks at regular intervals, serving as a scale or ruler.

This horizontal strip shows a portion of a musical manuscript page. It features several staves, each consisting of five horizontal lines. The notes are represented by small black shapes: some are solid circles, others are open circles with a dot or cross inside, and a few are solid squares. These notes have short vertical stems extending either upwards or downwards from their centers. The arrangement of notes varies across the staves, with some having single notes and others having pairs or groups of notes.

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וְיַעֲשֵׂה יְהוָה כָּל־אֲשֶׁר־יֹאמְרָה לְךָ בְּנֵי־יִשְׂרָאֵל

Digitized by srujanika@gmail.com

8:40 8:40

100.00	50000.00	20.00	200.00
100.00	50000.00	20.00	200.00
100.00	50000.00	20.00	200.00
100.00	50000.00	20.00	200.00
100.00	50000.00	20.00	200.00

כ>כ>כ>כ>כ> כ>כ>כ>כ>כ> כ>כ>כ>כ>כ>

100 200 300 400 500 600 700 800 900

1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

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**TEHP**  
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5000  
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