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ENVIRONMENTAL FATE STUDIES ON CERTAIN MUNITION WASTEWATER CONSTITUENTS

Phase III, Part I, Appendix 1

Final Report

By

RONALD J. SPANGGORD
WILLIAM R. MABEY
THEODORE MILL
TSONG-WEN CHOU
JAMES H. SMITH
SHONH LEE

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Katheryn F. Kenyon, Contracting Officer Technical Representative
U.S. Army Medical Bioengineering Research and Development Laboratory
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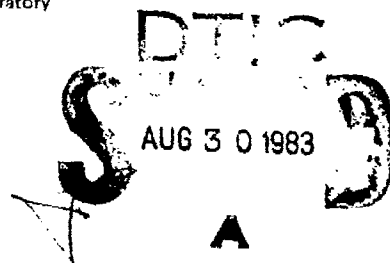
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report contains the high-pressure liquid chromatographic profiles of Holston River water extracts that were used to validate the SRI Computer Model which simulated the loss and movement of munition chemicals in the Holston River.		

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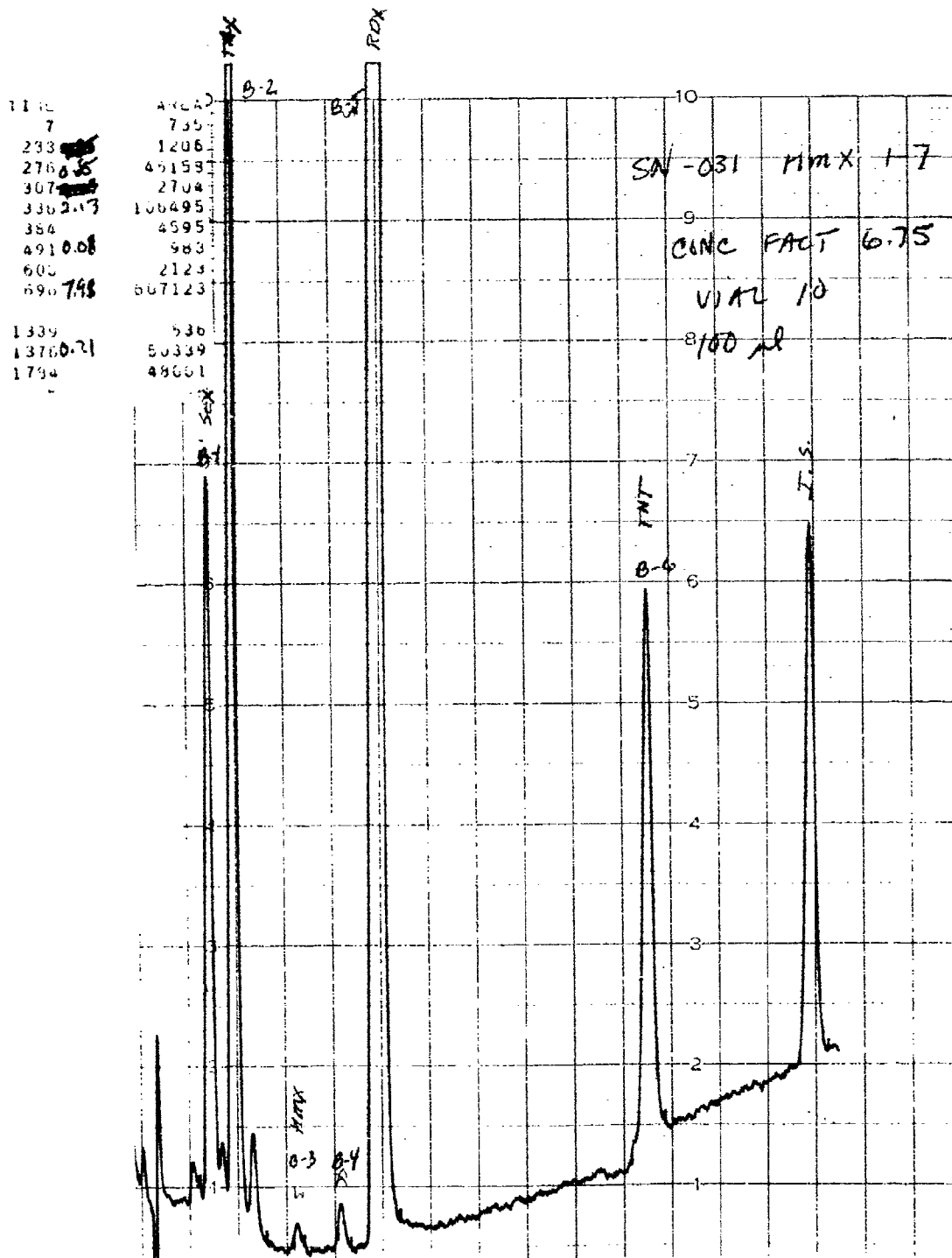


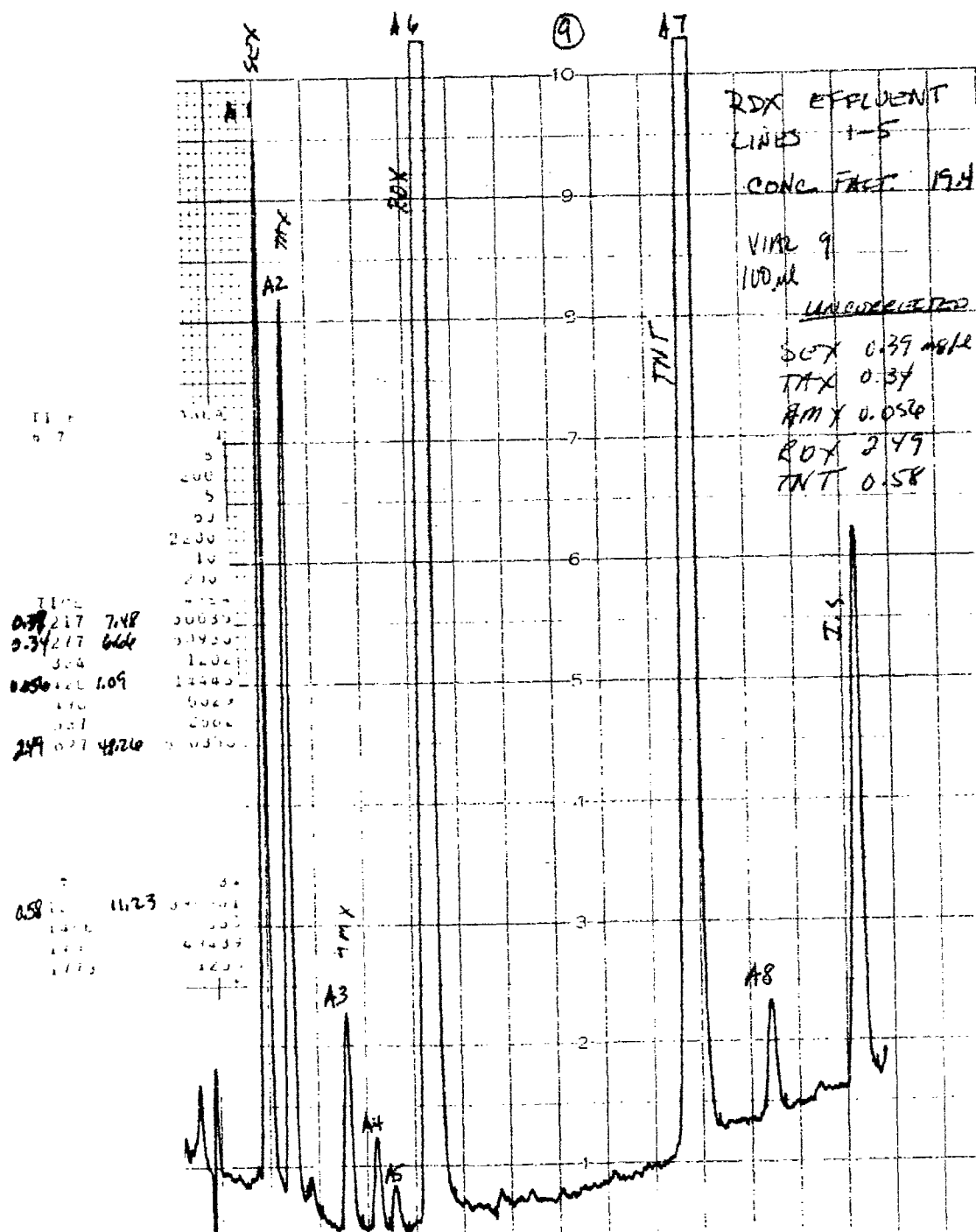
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I. INTRODUCTION

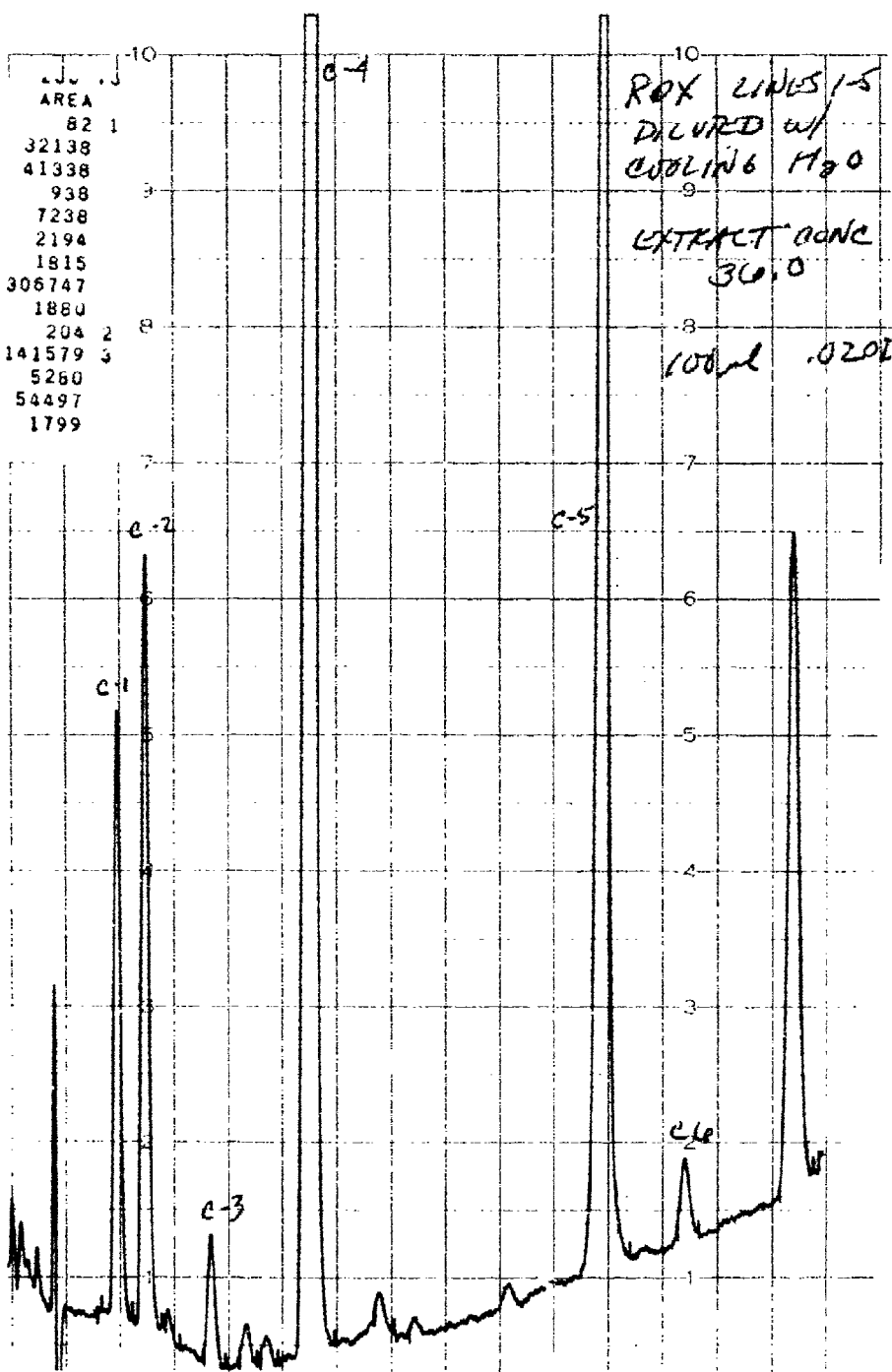
This appendix contains the high-pressure liquid chromatographic profiles of Holston Army Ammunition waste streams and Holston River extracts that were used in support of the Model Validation study. The conditions of the analyses and the analytical results appear in the Phase III-Part I report.

II. Chromatographic Profile

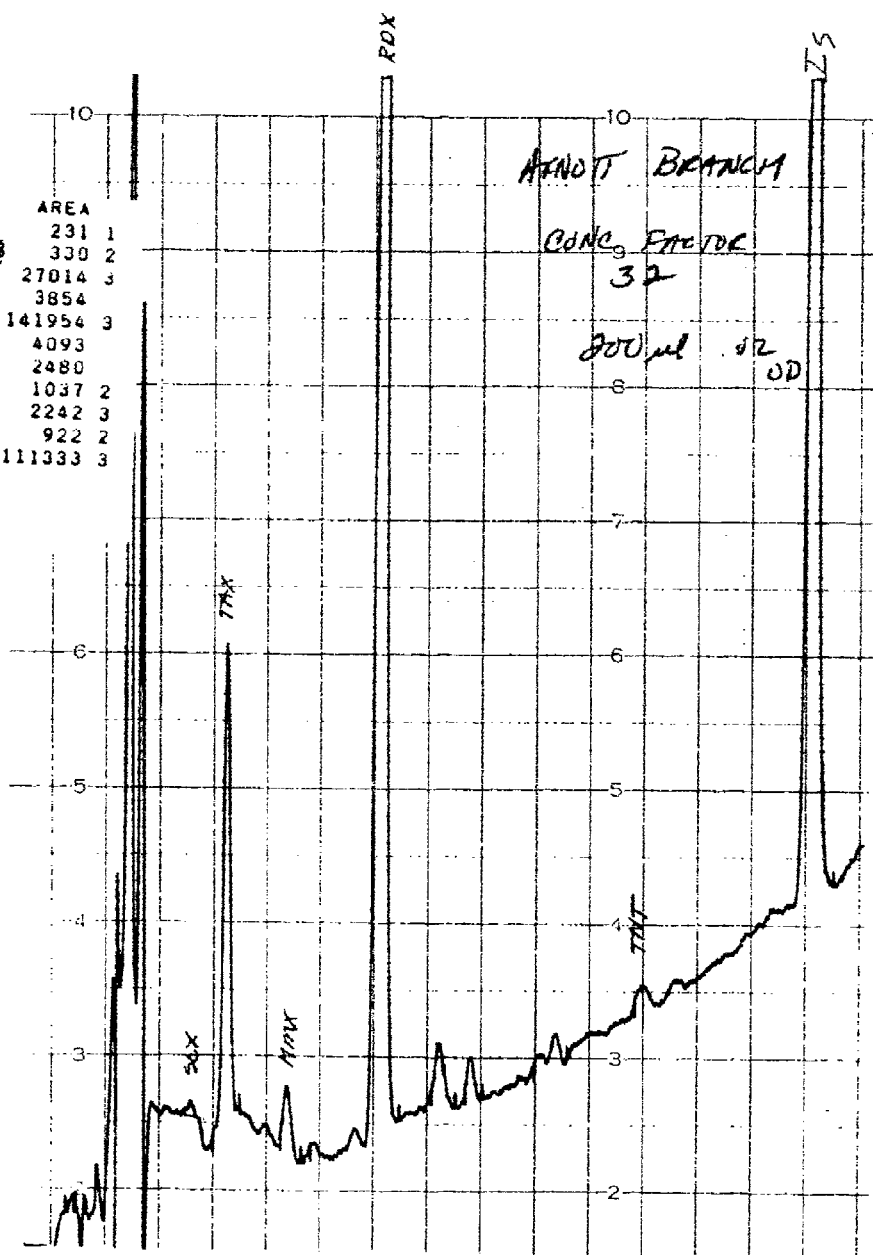




TIME	AREA
249	82
293 0.10	32138
354 0.13	41338
405	938
503 0.014	7238
581	2194
626	1815
720 0.68	306747
877	1880
946	204
1375 0.10	141579
1560	5260
1798	54497
1860	1799

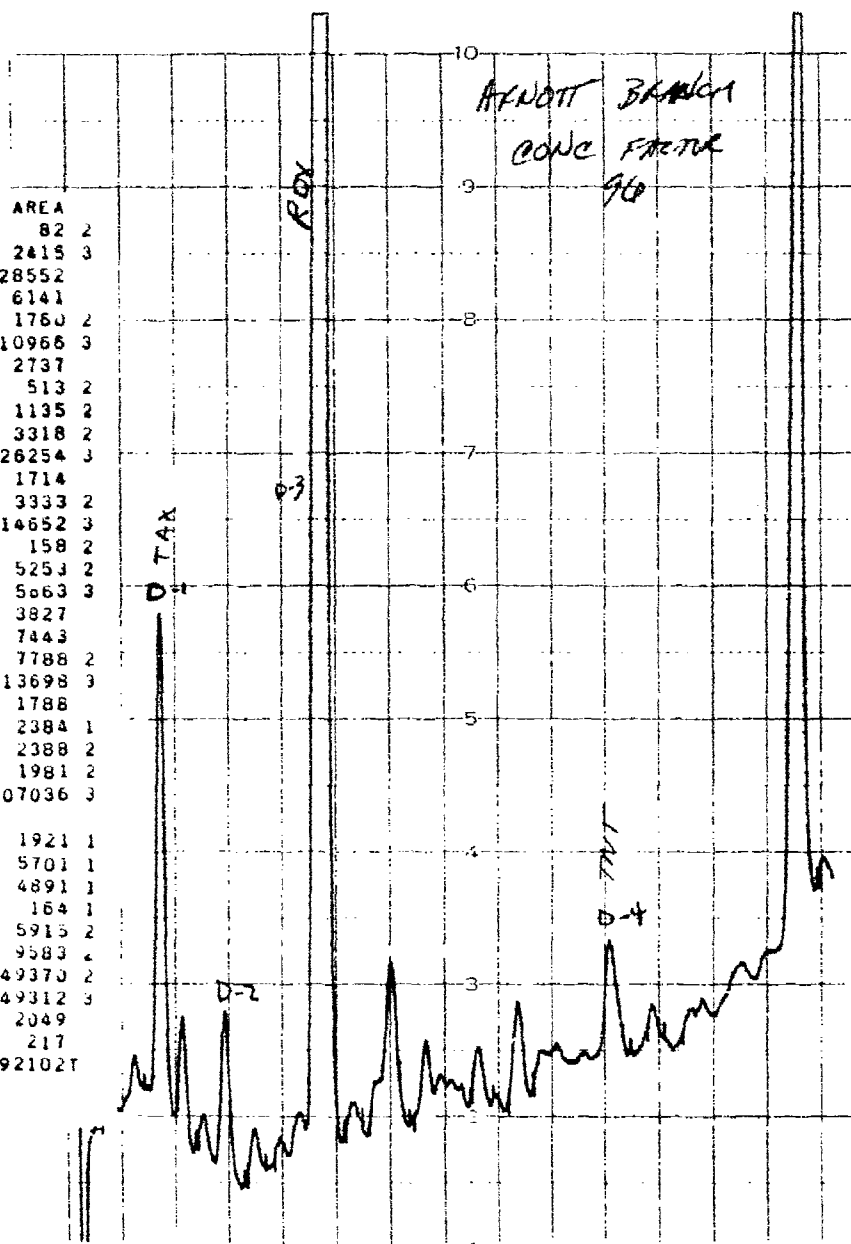


TIME	AREA	
6	231	1
120	<.0003	330 2
344	0.05	27014 3
482	0.004	3854
688	0.17	141954 3
826		4093
897		2480
1047		1037 2
1085		2242 3
1274		922 2
1654		111333 3



TIME	AREA
206	82 2
278	2415 3
334	28552
386	6141
431	1760 2
479	10966 3
547	2737
599	513 2
607	1135 2
646	3318 2
691	426254 3
764	1714
822	3333 2
856	14652 3
908	158 2
935	5253 2
965	5063 3
1052	3827
1142	7443
1192	7788 2
1349	13698 3
1440	1788
1517	2384 1
1554	2388 2
1619	1981 2
1763	107036 3
1823	1921 1
1854	5701 1
1868	4891 1
1885	164 1
1899	5915 2
1917	9583 4
1952	49370 2
2065	149312 3
2120	2049
2159	217

892102T



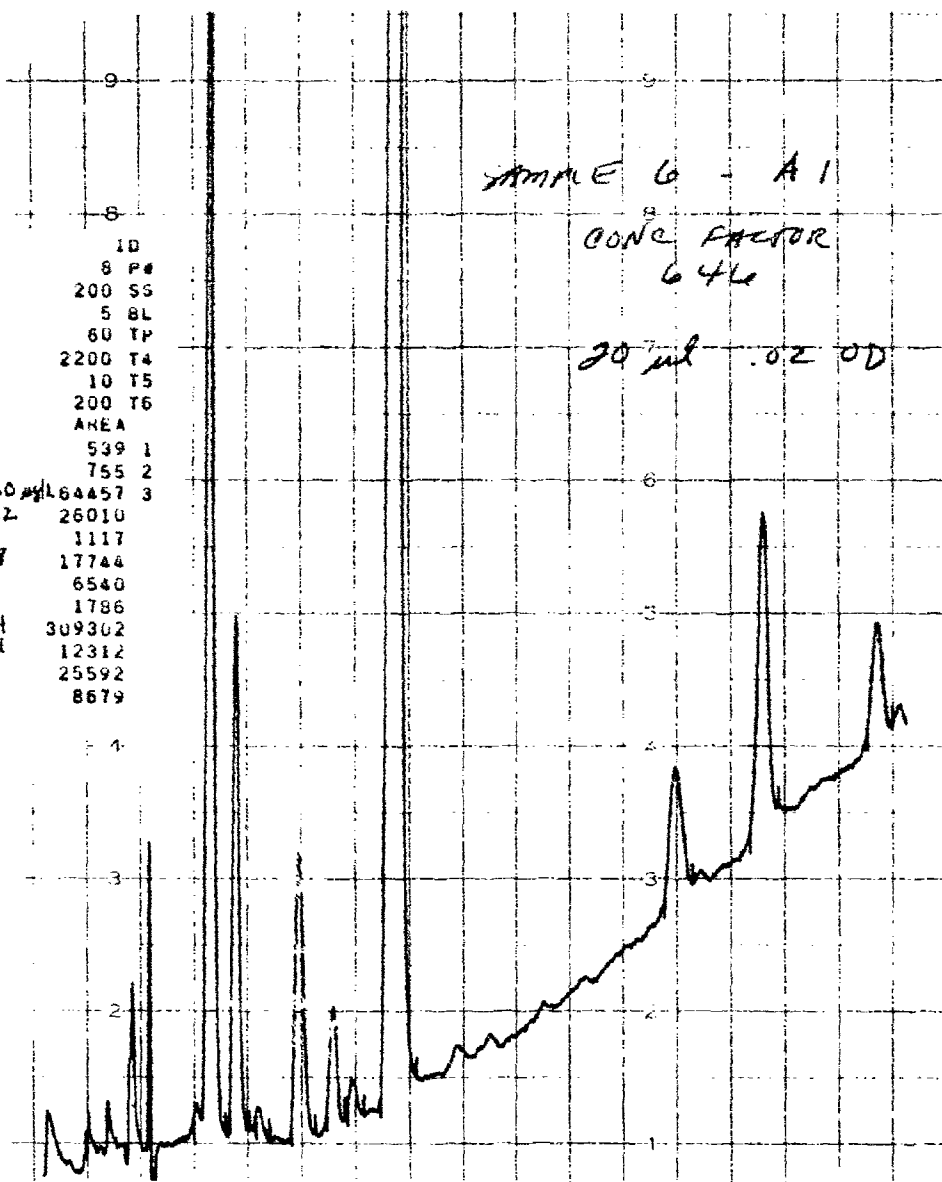
7

TIME	AREA
7	539 1
252	755 2
280 70.0 µg/L	64457 3
339 30.2	26010
389	1117
482 7.8	17744
559	6540
600	1786
691 234	309302
NT 1328 3.1	12312
1522	25592
1777	8679

SAMPLE 6 - A1

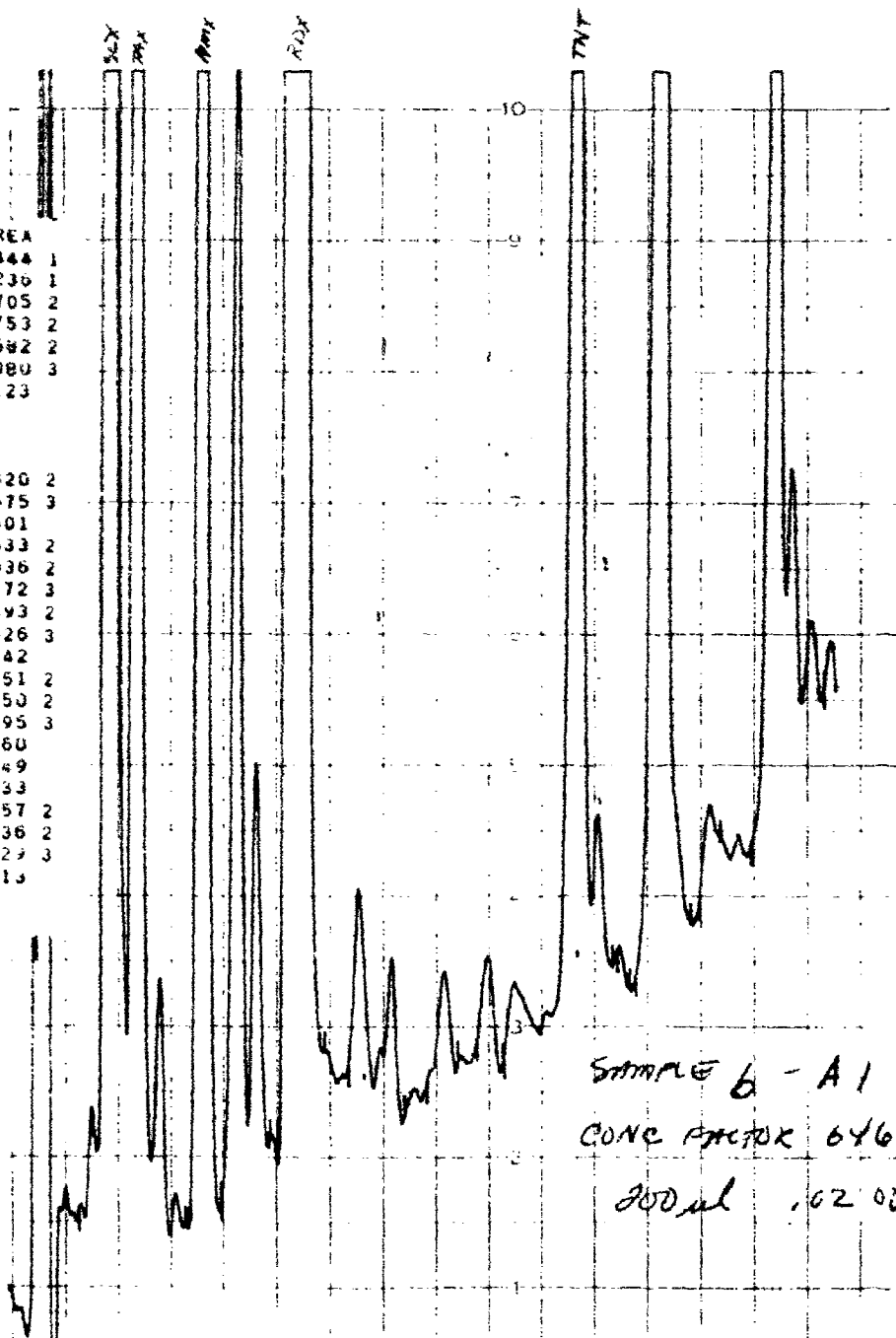
CONC FACTOR
646

20 µl .02 OD



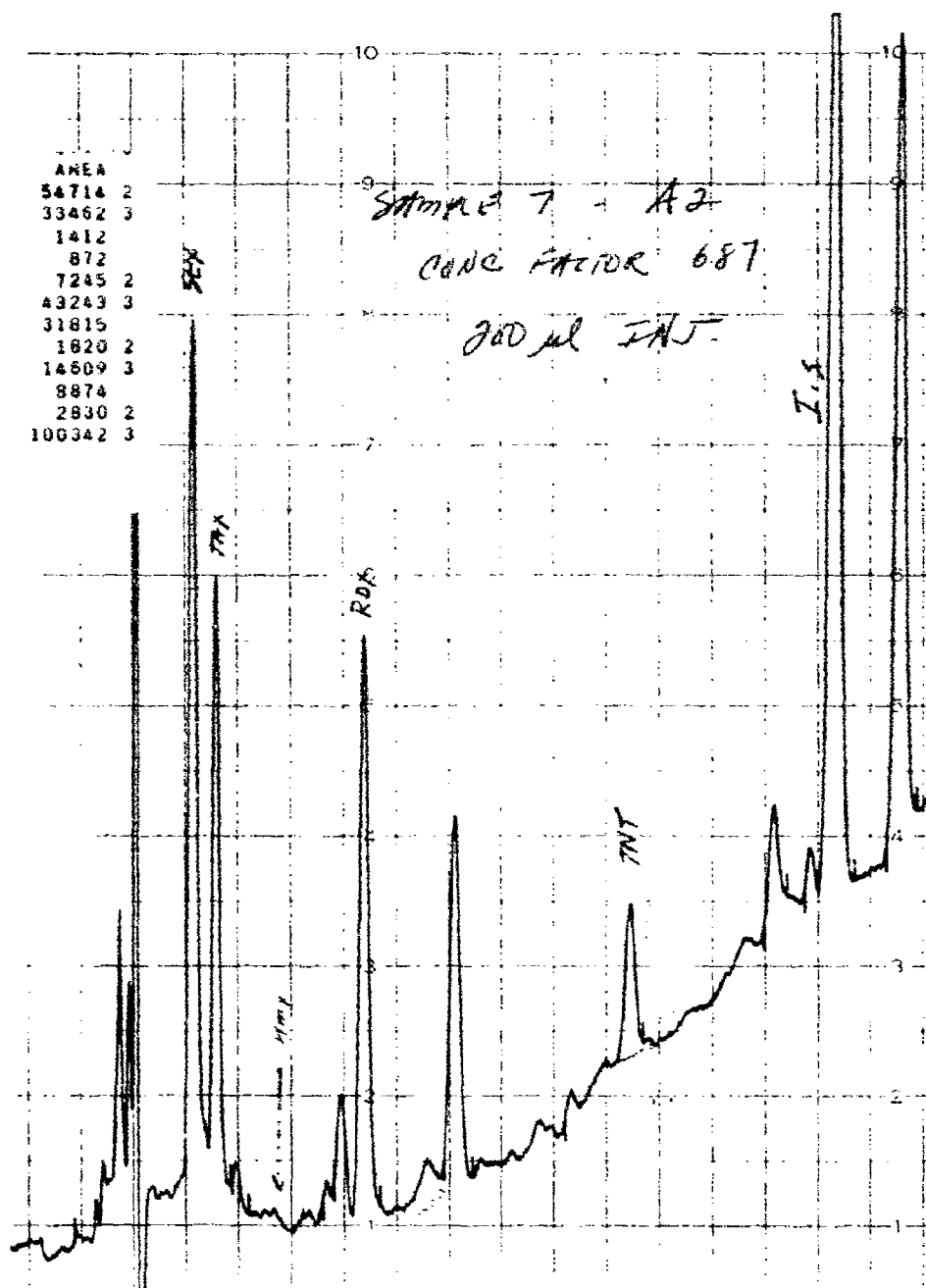
TIME	AREA	
211	444	1
240	6236	1
276 56.14	1705	2
337 20.0	295753	2
393	16582	2
431	2080	3
489 6.17	195123	

569	84820	2
613	27575	3
696 171.8	3134501	
748	18033	2
898	3036	2
924	10672	3
1012	493	2
1045	10026	3
1144	9442	
1205	9851	2
1344 2.9	157050	2
1398	12395	3
1441	860	
1533	309849	
1649	5433	
1794 4.15	119957	2
1837	23436	2
1879	8529	3
1923	3113	

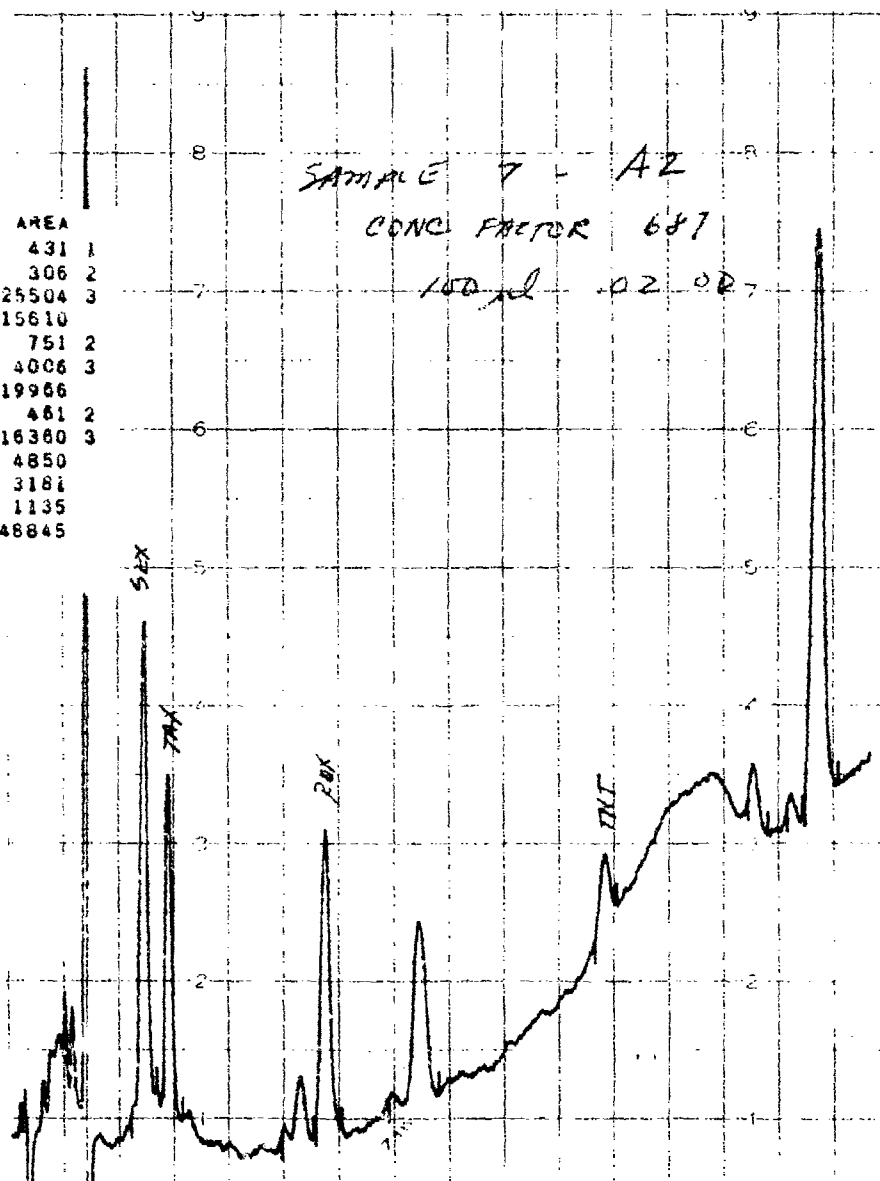


SAMPLE 6 - A1
 CONC FACTOR 646
 200ul .0200

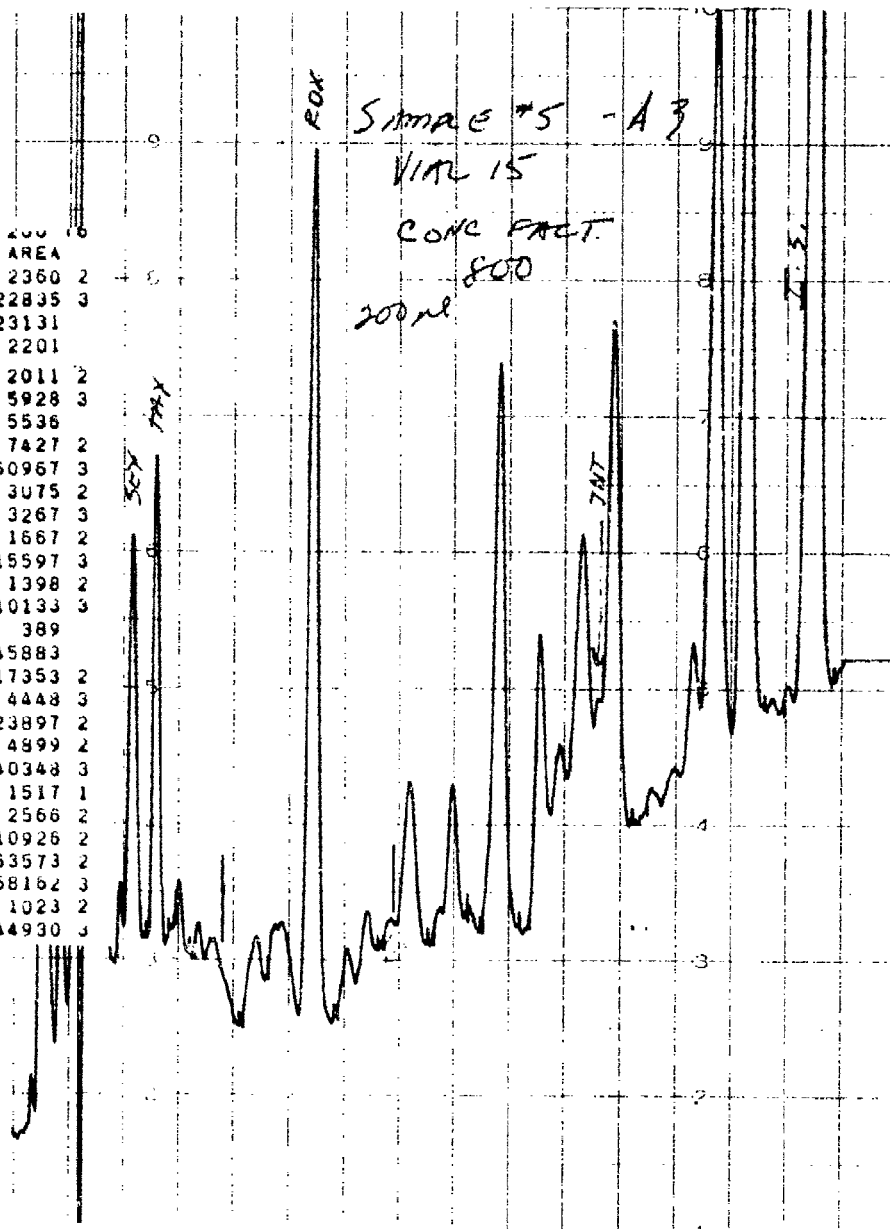
TIME	AREA
272 1.0	54714 2
325 3.1	33462 3
370	1412
579	872
611	7245 2
663 2.1	43243 3
871	31815
1140	1820 2
1273 1.1	14609 3
1598	8874
1881	2830 2
1737	100342 3



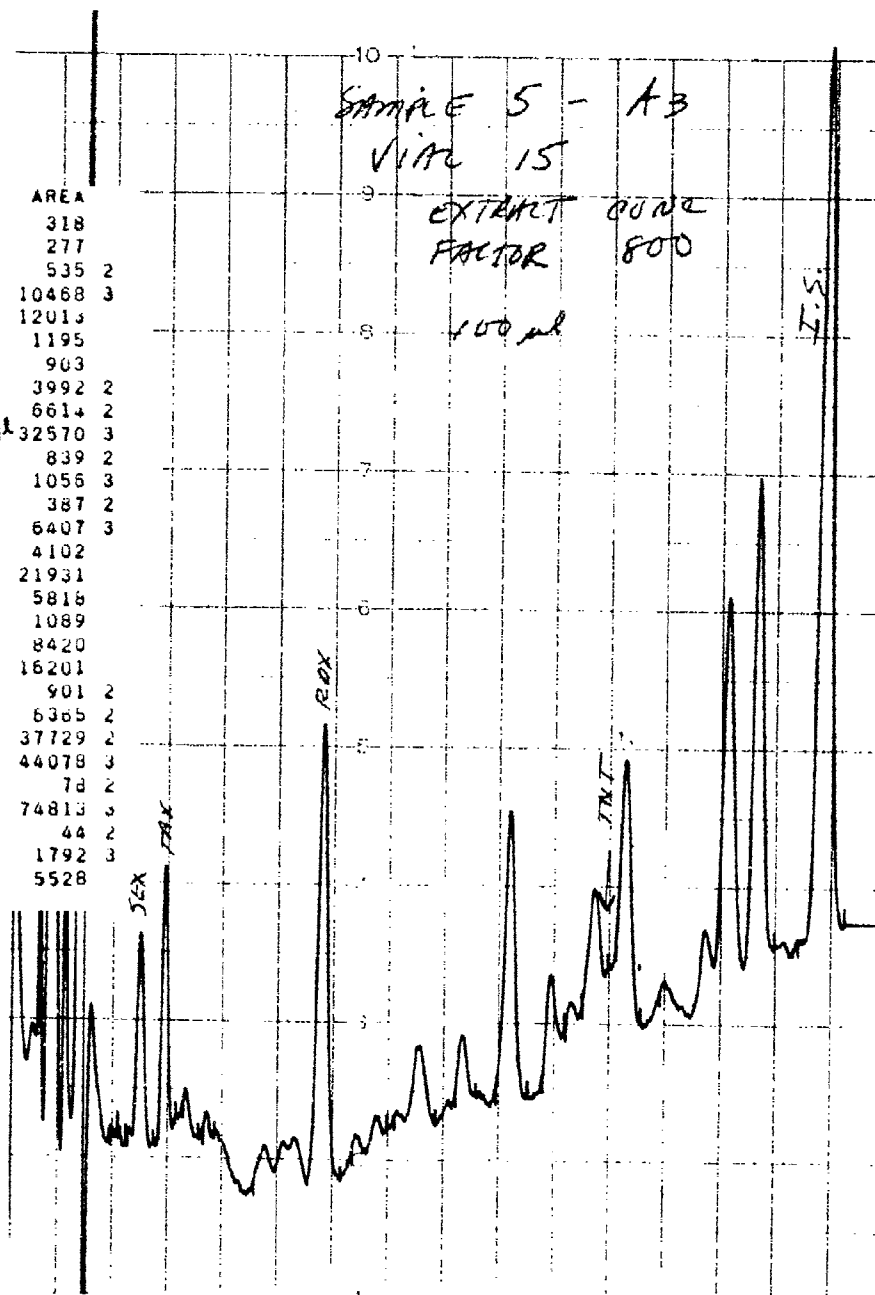
TIME	AREA
7	431 1
249	306 2
271 4.0	25504 3
326 3.0	15610
581	751 2
615	4006 3
671 2.5	19966
809	481 2
874	16360 3
1279 2.0?	4850
1605	3181
1689	1135
1747	48845



TIME	AREA
252	2360 2
276 1.2	22835 3
329 1.7	23131
378	2201
421	2011 2
448	5928 3
548	5536
589	7427 2
670	60967 3
745	3075 2
790	3267 3
836	1667 2
883	15597 3
945	1398 2
978	10133 3
1013	389
1079	45883
1167	17353 2
1212	4448 3
1259	23897 2
1294 .08	4899 2
1326	40348 3
1410	1517 1
1455	2566 2
1501	10926 2
1544	63573 2
1613	68162 3
1703	1023 2
1755	144930 3



TIME	AREA
217	318
233	277
256	535 2
279 1.1 ug/l	10468 3
332 1.7 ug/l	12013
380	1195
425	903
552	3992 2
592	6614 2
677 2.4 ug/l	32570 3
751	839 2
798	1056 3
839	387 2
889	6407 3
987	4102
1090	21931
1177	5818
1221	1089
1270	8420
1338 0.4 ug/l	16201
1420	901 2
1512	6365 2
1559	37729 2
1625	44078 3
1714	78 2
1757 D	74813 3
1832	44 2
1846	1792 3
1881	5528



TIME
#14

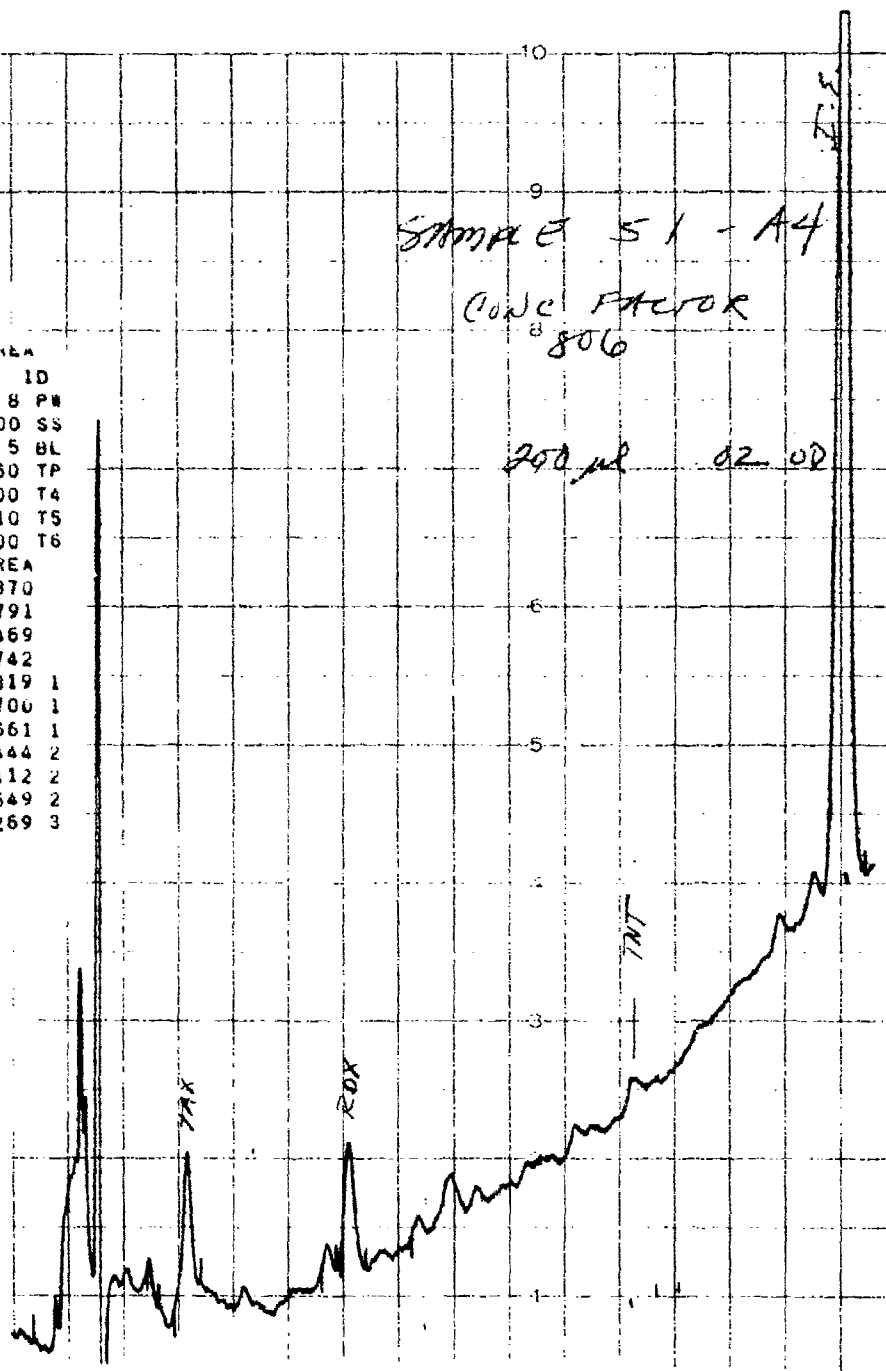
TIME
257
342 .71
645
693 .42
841
910
1185
1312
1633
1707
1769

AREA
ID
8 PM
200 SS
5 BL
60 TP
2200 T4
10 T5
200 T6
AREA
870
9791
1469
8742
1819 1
9700 1
70661 1
32444 2
65112 2
9549 2
109269 3

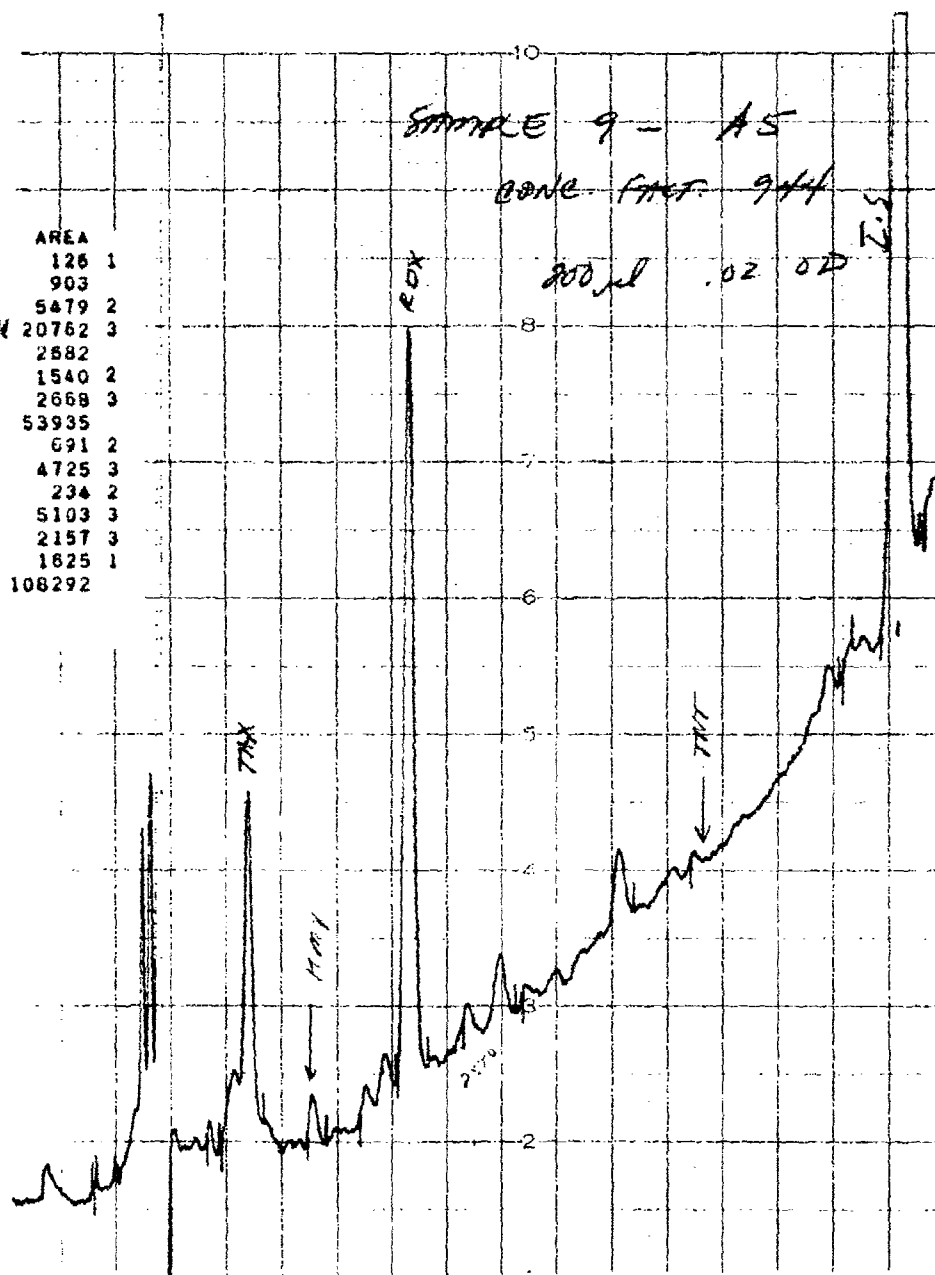
SAMPLE 51 - A4

CONC FACTOR
806

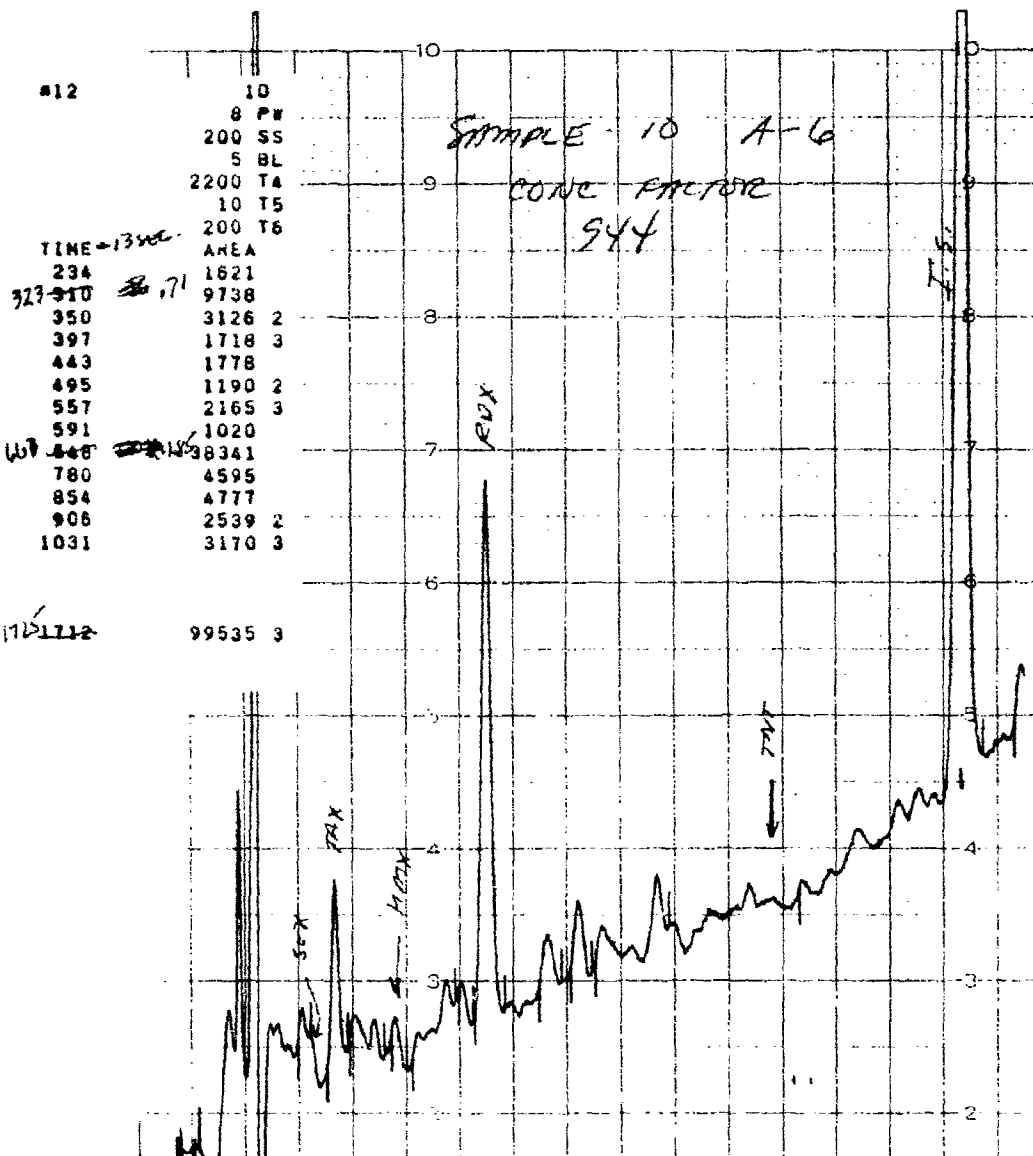
200 µl 02.00



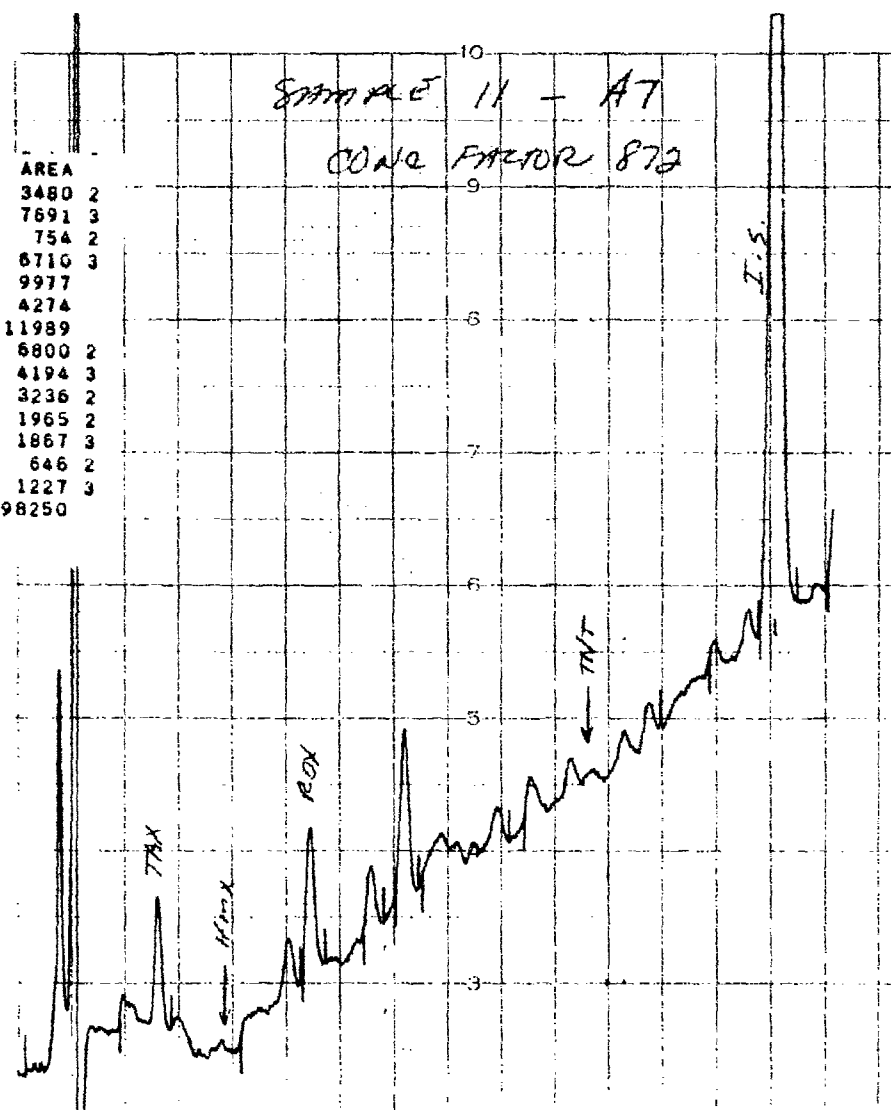
TIME	AREA	
8	126	1
260	903	
313	5479	2
345 1.7 µg/L	20762	3
488 C.I	2582	
604	1540	2
644	2668	3
697 L3	53935	
824	691	2
896	4725	3
953	234	2
1157	5103	3
1616	2157	3
1667	1625	1
1768	108292	



2/1/81

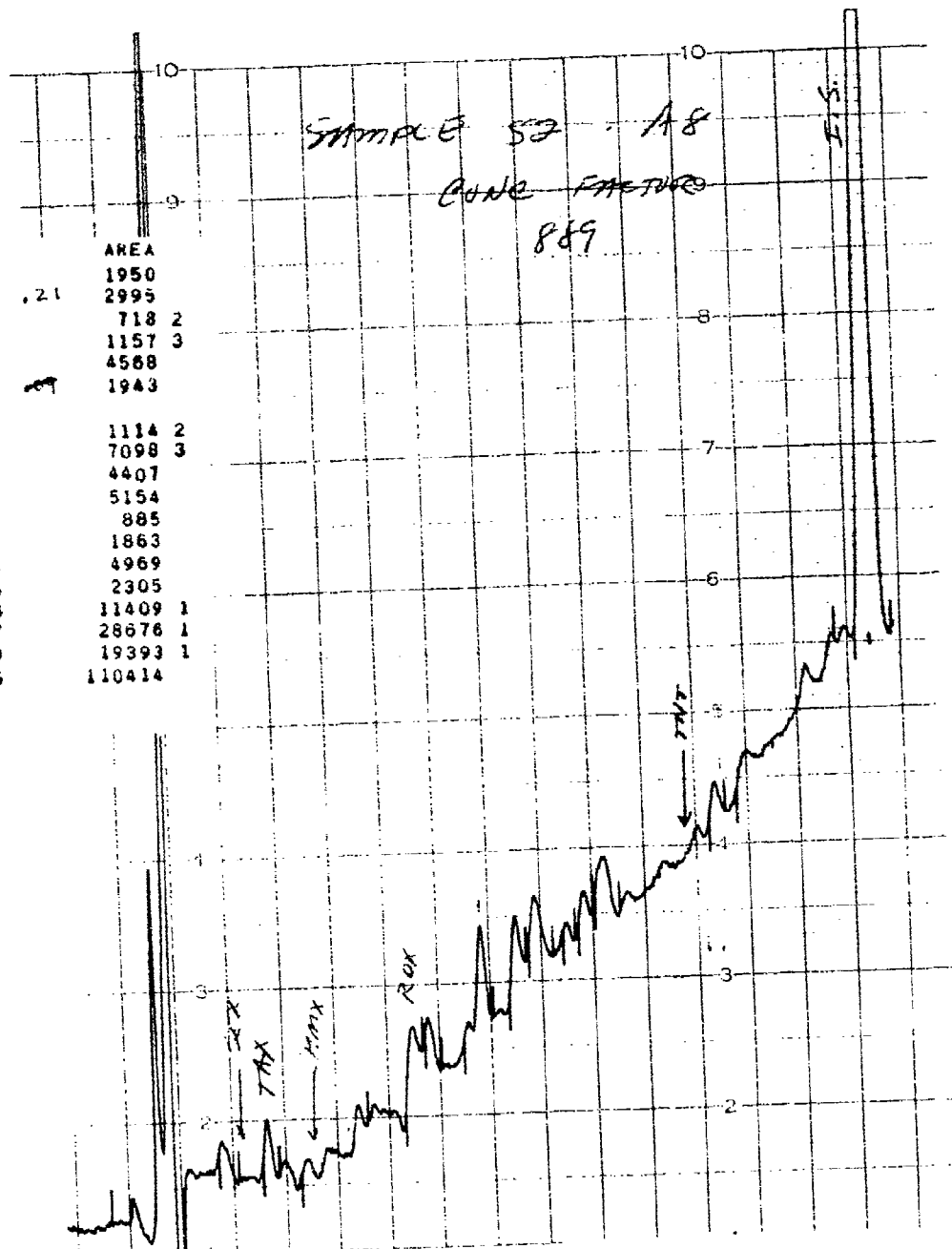


TIME	AREA
221	3480 2
297 .61	7691 3
493	754 2
591	6710 3
842 .64	9977
780	4274
853	11989
909	6800 2
1059	4194 3
1135	3236 2
1225	1965 2
1400	1867 3
1545	646 2
1623	1227 3
1681	98250



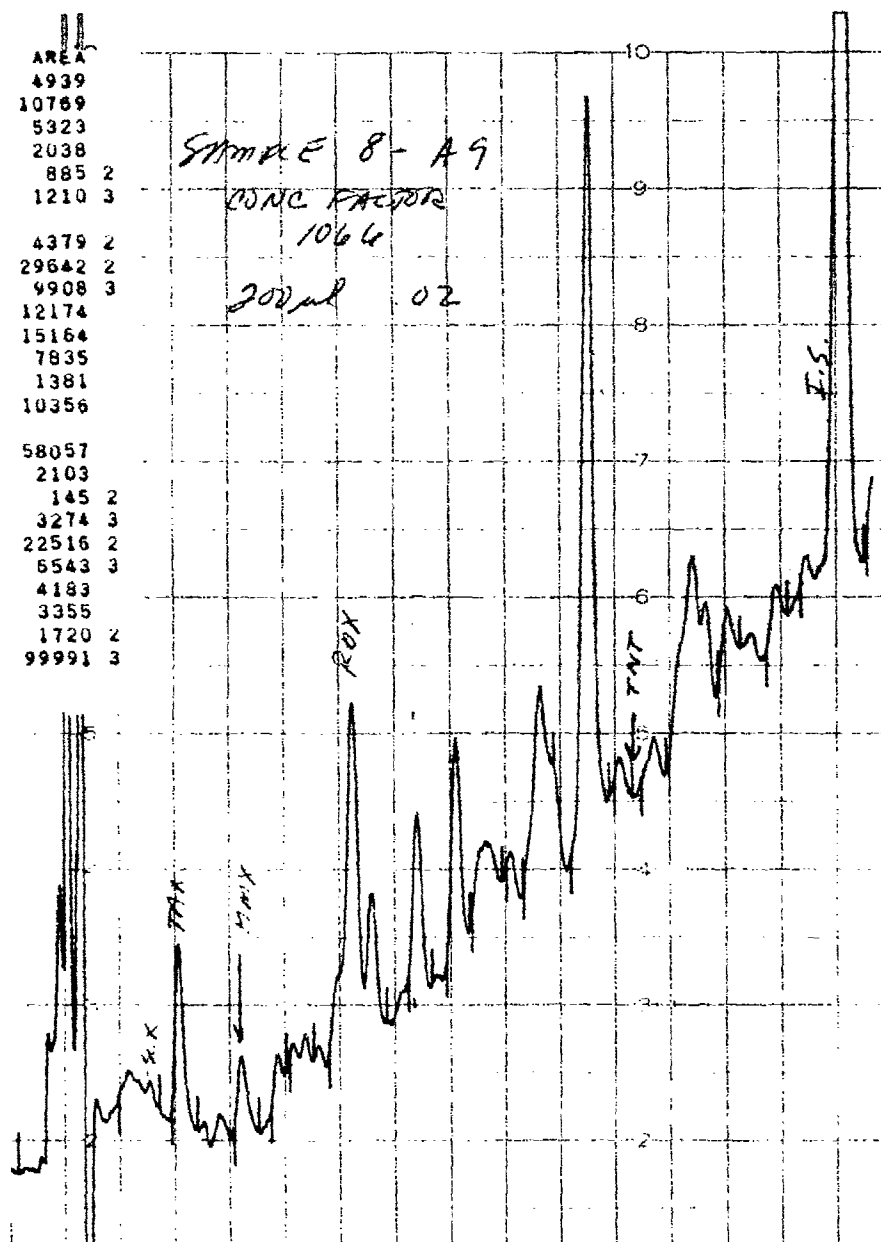
44

TIME	AREA
261	1950
367	2995
444	718 2
577	1157 3
705	4588
741	1943
834	1114 2
868	7098 3
949	4407
994	5154
1063	885
1107	1863
1153	4969
1418	2305
1488	11409 1
1637	28676 1
1699	19393 1
1785	110414



5/5

TIME	AREA
227	4939
354	10769
491	5323
571	2038
603	885 2
631	1210 3
705	4379 2
736	29642 2
777	9908 3
877	12174
961	15164
1016	7835
1079	1381
1147	10356
1251	58057
1321	2103
1369	145 2
1397	3274 3
1482	22516 2
1509	6543 3
1558	4183
1663	3355
1727	1720 2
1802	99991 3



515

TIME
239
255
327 ⁴⁰
478
553
665
692 ²¹

764
823
857
942
1063
1144
1355
1407
1472
1585
1749

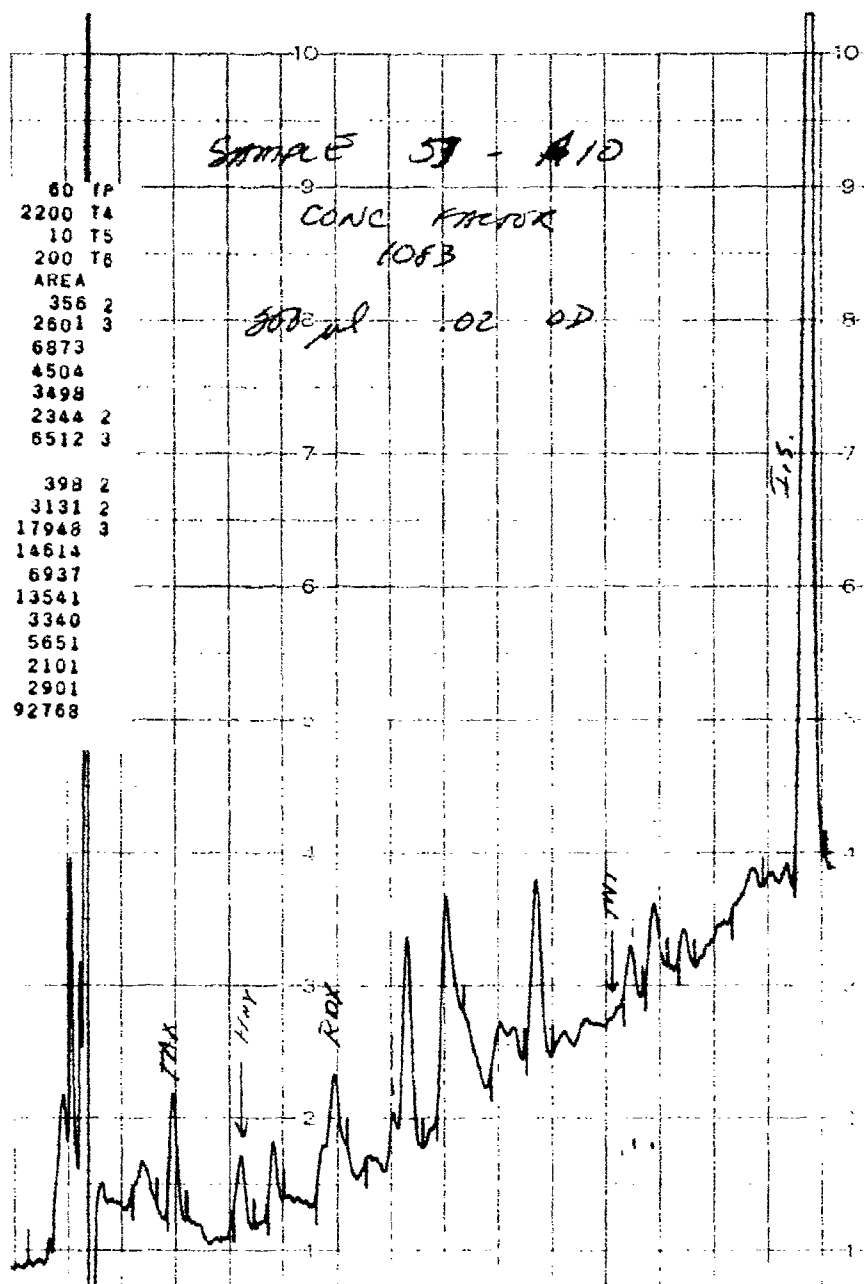
60 TP
2200 T4
10 T5
200 T6
AREA
356 2
2601 3
6873
4504
3498
2344 2
6512 3

398 2
3131 2
17948 3
14614
6937
13541
3340
5651
2101
2901
92768

SAMPLE 53 - A10

CONC KEROX
1083

500 pl .02 OD



515

TIME

261

277

345

379

502

588

718

.7

101

80 T4

2200 T4

10 T5

200 T6

AREA

951 2

1638 3

9786 1

139 1

12905

4084

31416

3741 2

22570 3

3770

6728

3469

1448

17131

3096

3107 2

8206 3

7086

2415

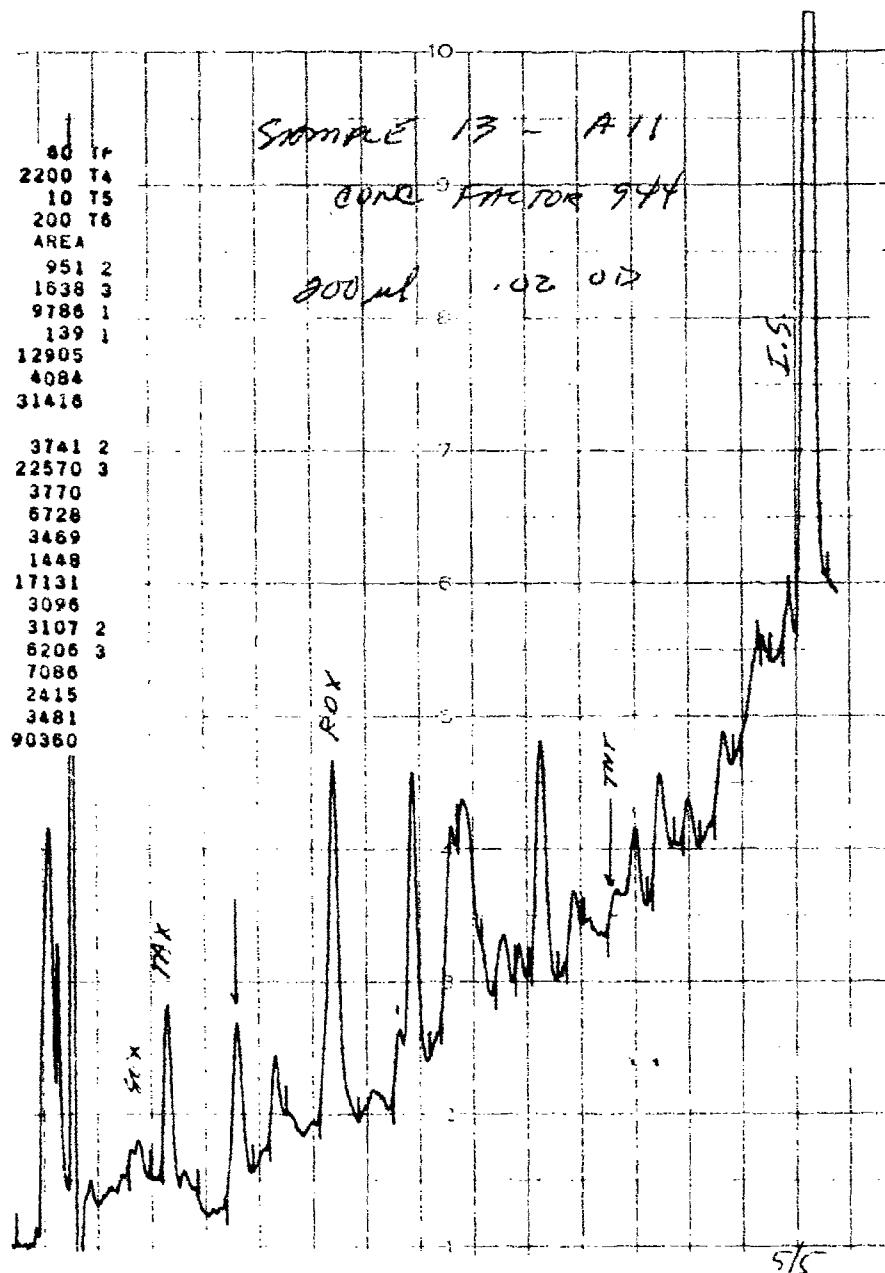
3481

90360

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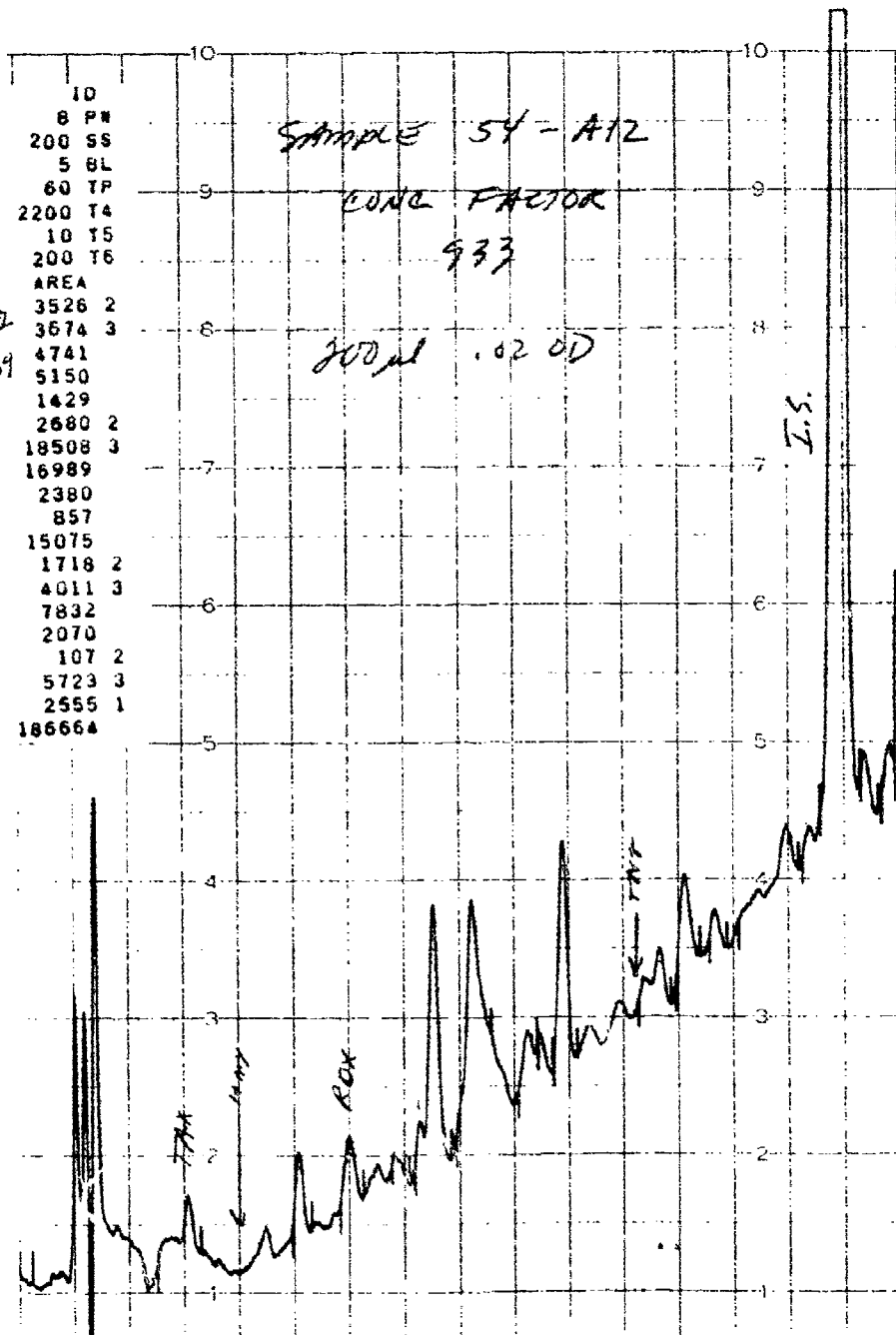
CONC FACTOR 944

200 ul .02 017



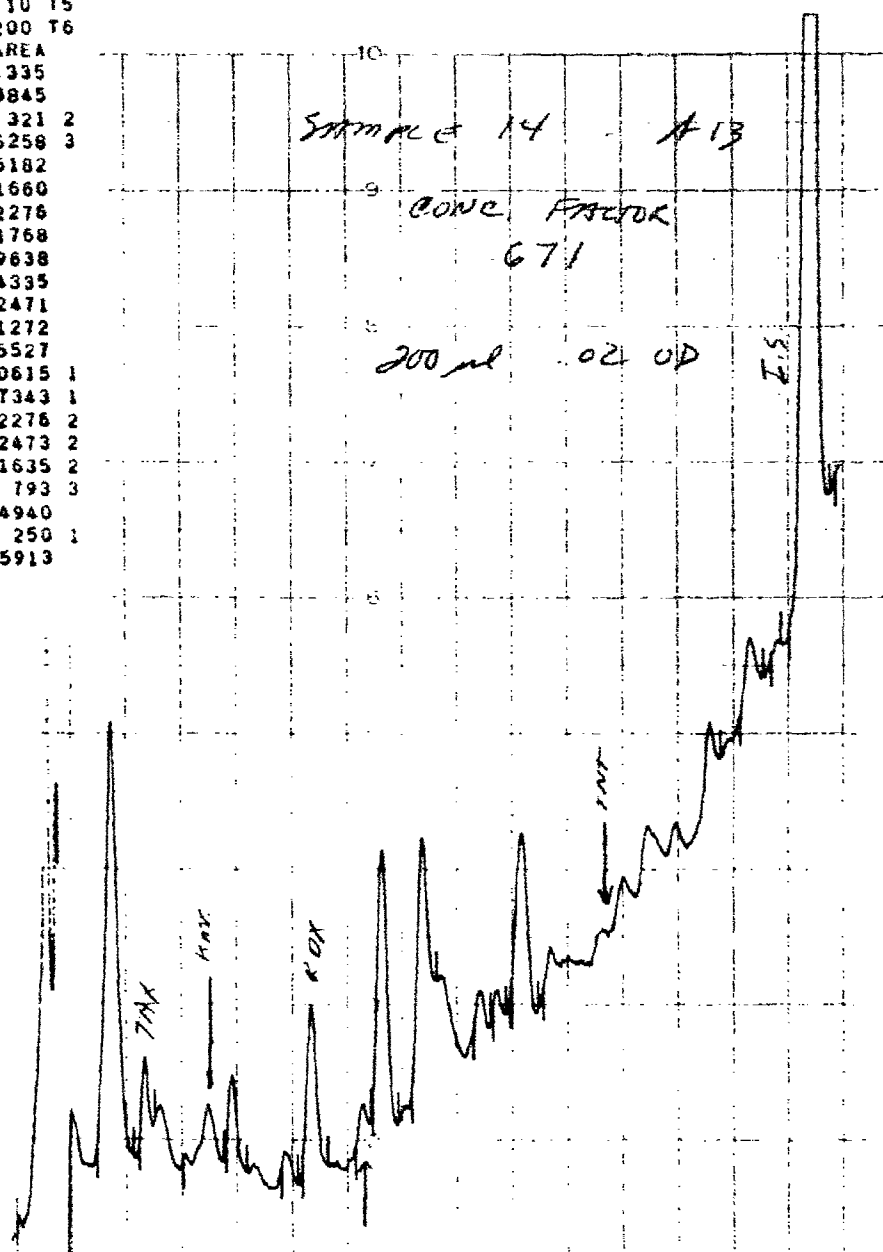
#17

TIME	ID	AREA
283	8 PW	3526 2
340	200 SS	3674 3
584	5 BL	4741
695	60 TP	5150
794	2200 T4	1429
849	10 T5	2680 2
881	200 T6	18508 3
905		16989
1086		2380
1112		857
1163		15075
1338		1718 2
1372		4011 3
1429		7832
1493		2070
1548		107 2
1650		5723 3
1700		2555 1
1764		186664



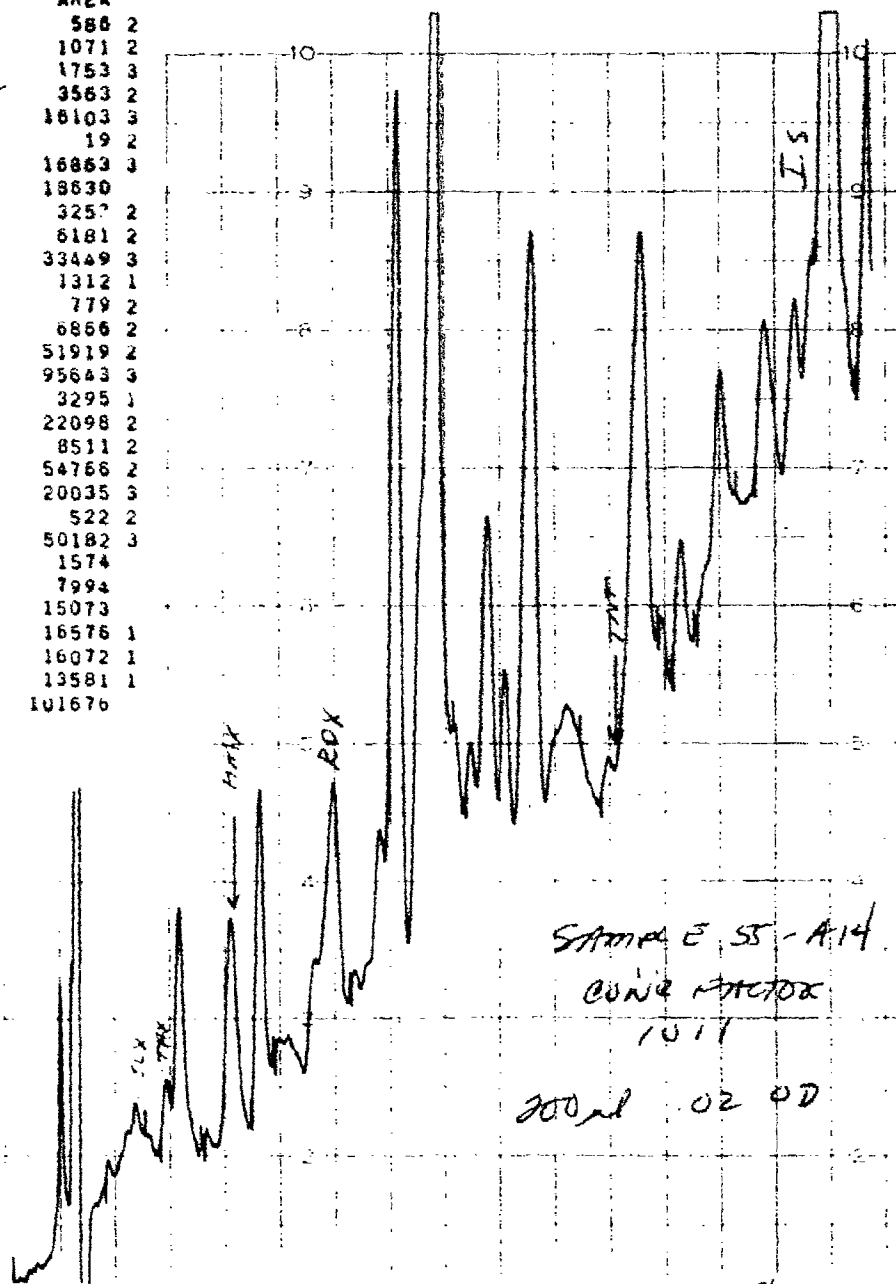
5/5

5 BL
 2200 T4
 10 T5
 200 T6
 TIME AREA
 257 41335
 333 .33 3845
 419 321 2
 473 5258 3
 525 5182
 640 1660
 697 .78 12276
 809 1768
 851 19638
 940 14335
 1085 2471
 1101 1272
 1157 15527
 1221 10615 1
 1327 7343 1
 1378 12276 2
 1434 12473 2
 1493 1635 2
 1573 793 3
 1659 4940
 1709 250 1
 1786 105913



519

TIME	AREA
212	586 2
252	1071 2
269	1753 3
338	3563 2
366	18103 3
426	19 2
479	16863 3
542	18630
581	3257 2
662	6181 2
702	33449 3
747	1312 1
776	779 2
805	6866 2
840	51919 2
923	95643 3
1005	3295 1
1041	22098 2
1081	8511 2
1138	54766 2
1190	20035 3
1307	522 2
1377	50182 3
1425	1574
1467	7994
1553	15073
1648	16576 1
1713	16072 1
1749	13581 1
1783	101676



SAMPLE 55 - A14

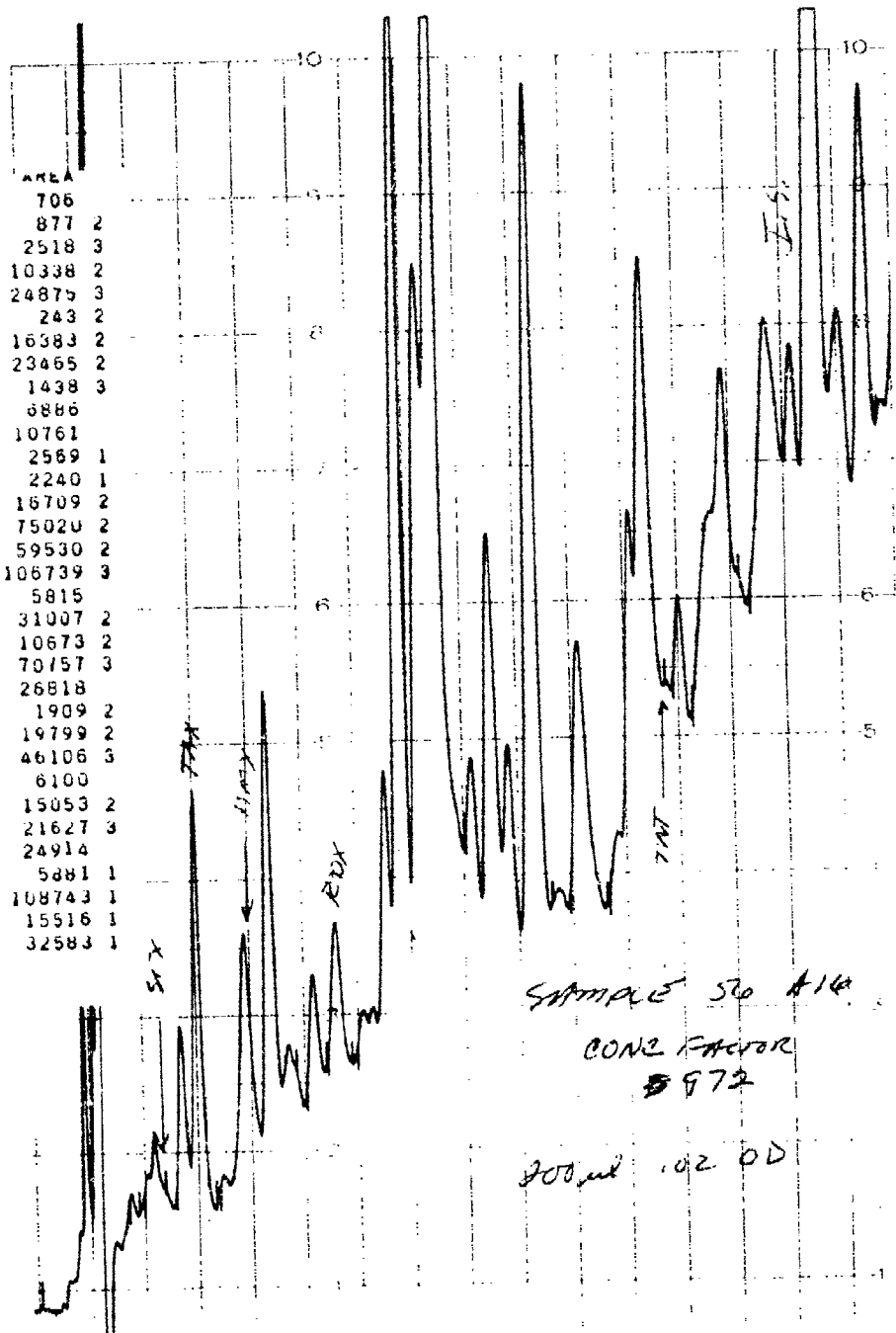
CONC FACTOR

1011

200 ml 02 00

5/10

TIME	AREA
203	706
242	877 2
258	2518 3
319	10338 2
357	24879 3
409	243 2
465	16383 2
520	23465 2
559	1438 3
617	6886
666	10761
727	2569 1
747	2240 1
780	16709 2
815	75020 2
863	59530 2
896	106739 3
973	5815
1015	31007 2
1055	10673 2
1110	70157 3
1213	26818
1296	1909 2
1332	19799 2
1364	46106 3
1441	6100
1509	15053 2
1541	21627 3
1638	24914
1697	5881 1
1745	108743 1
1801	15516 1
1853	32583 1

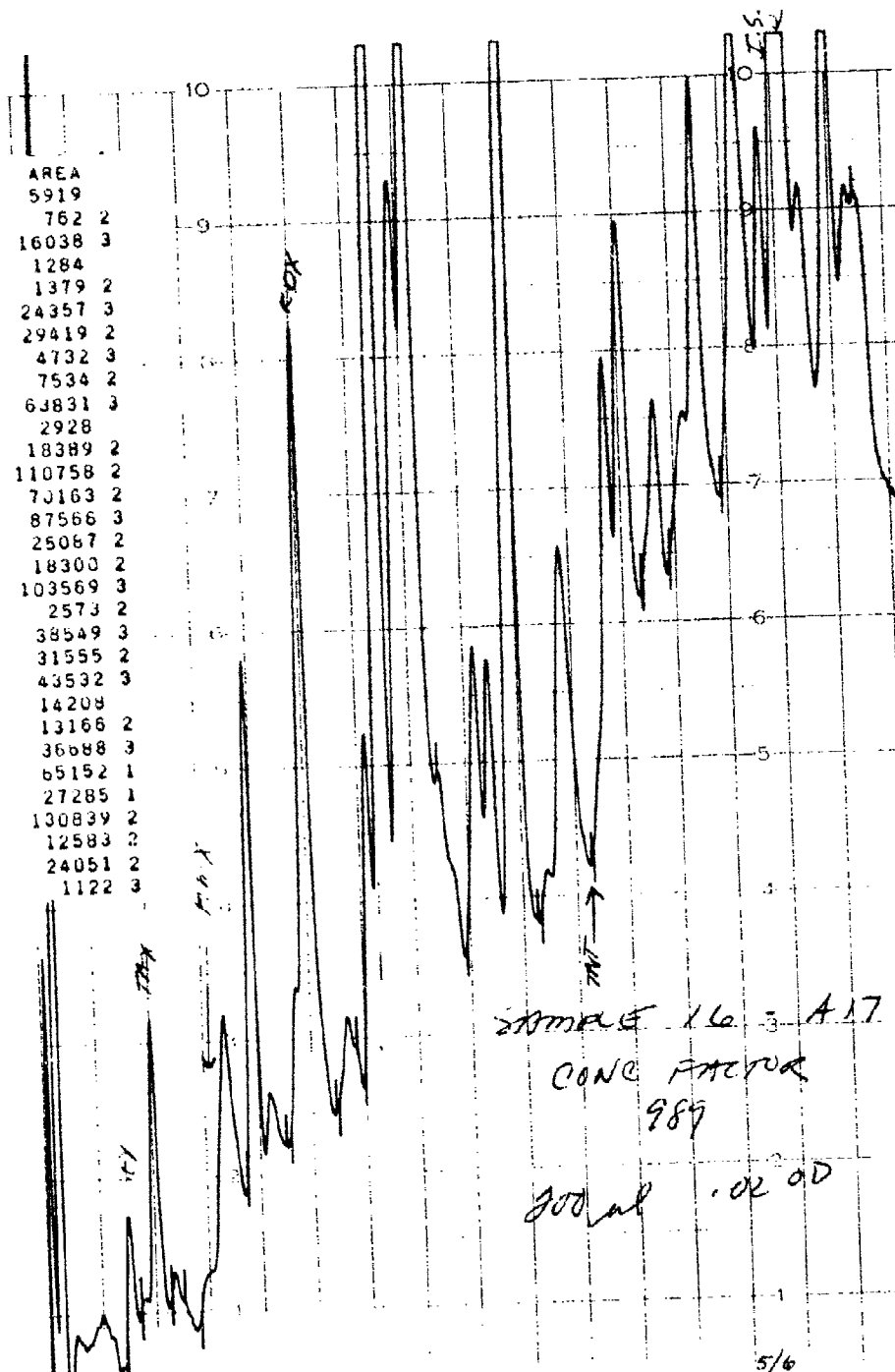


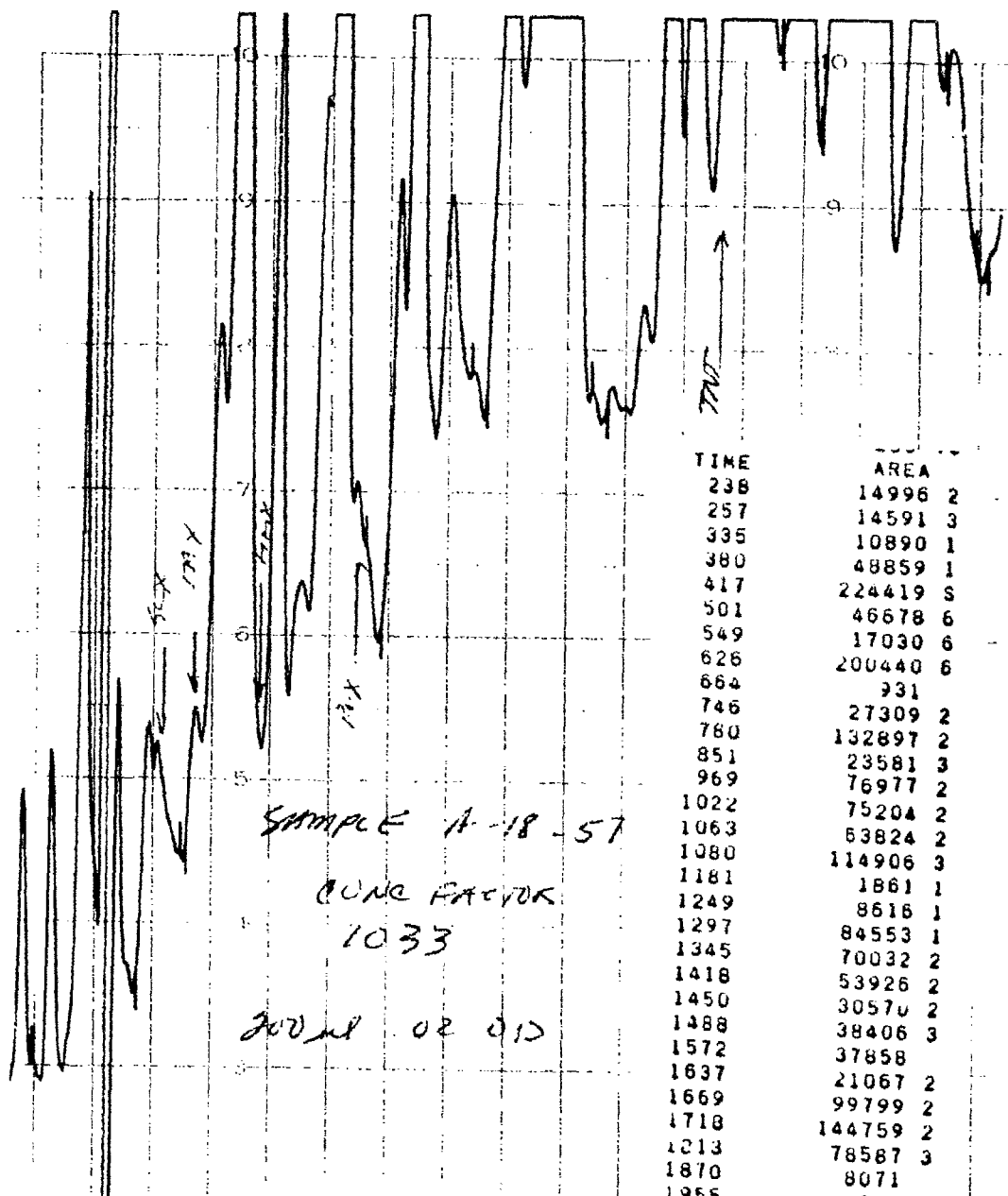
SAMPLE 50 A14
CONC FACTOR
5972

200 ml 102 OD

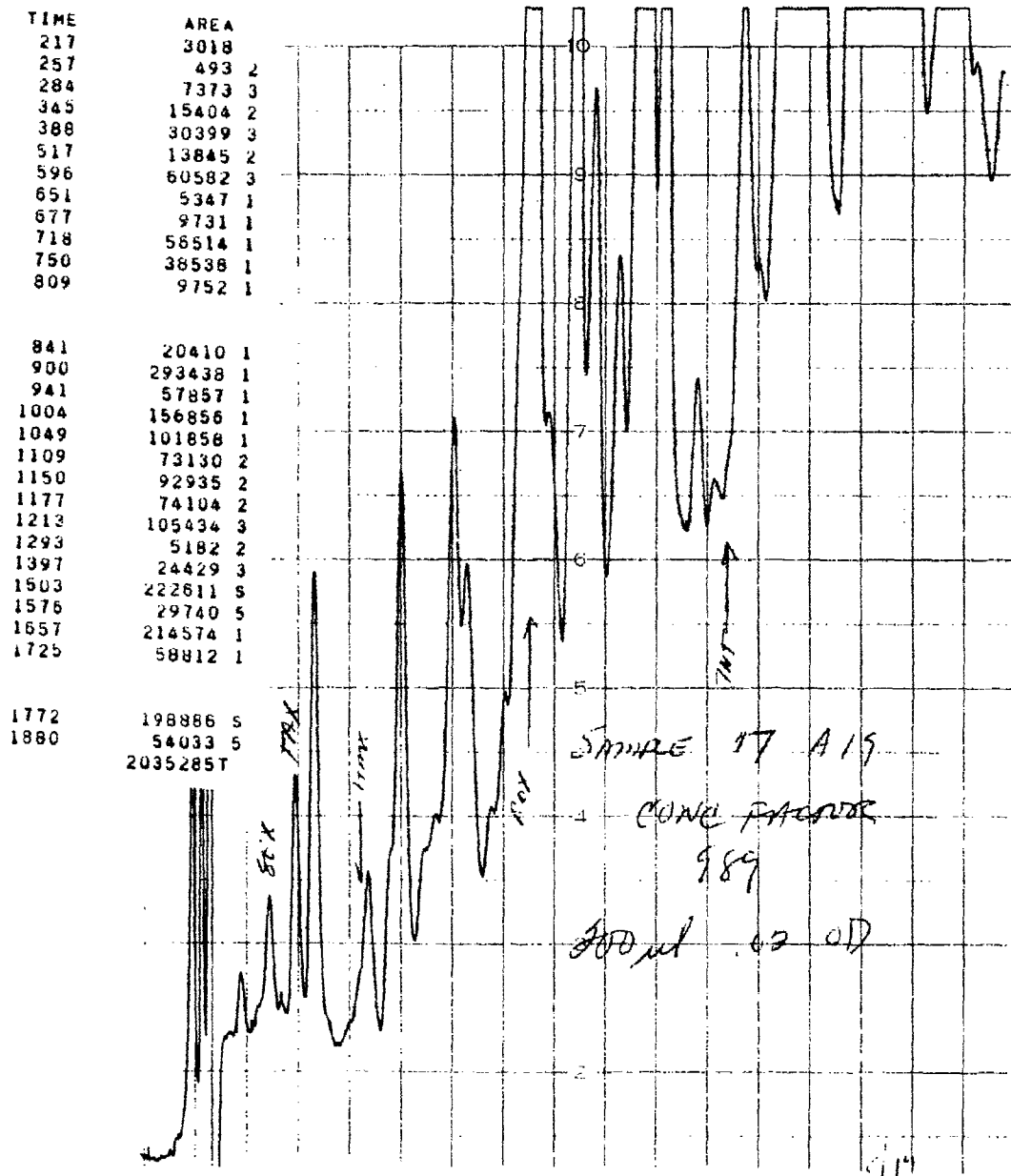
510

TIME	AREA
285	5919
314	762 2
345	16038 3
385	1284
459	1379 2
510	24357 3
573	29419 2
609	4732 3
674	7534 2
701	63831 3
786	2928
841	18389 2
875	110758 2
925	70163 2
958	87566 3
1087	25067 2
1119	18300 2
1172	103569 3
1241	2573 2
1285	38549 3
1394	31555 2
1430	43532 3
1505	14208
1569	13166 2
1605	36688 3
1696	65152 1
1750	27285 1
1793	130839 2
1834	12583 2
1900	24051 2
1981	1122 3



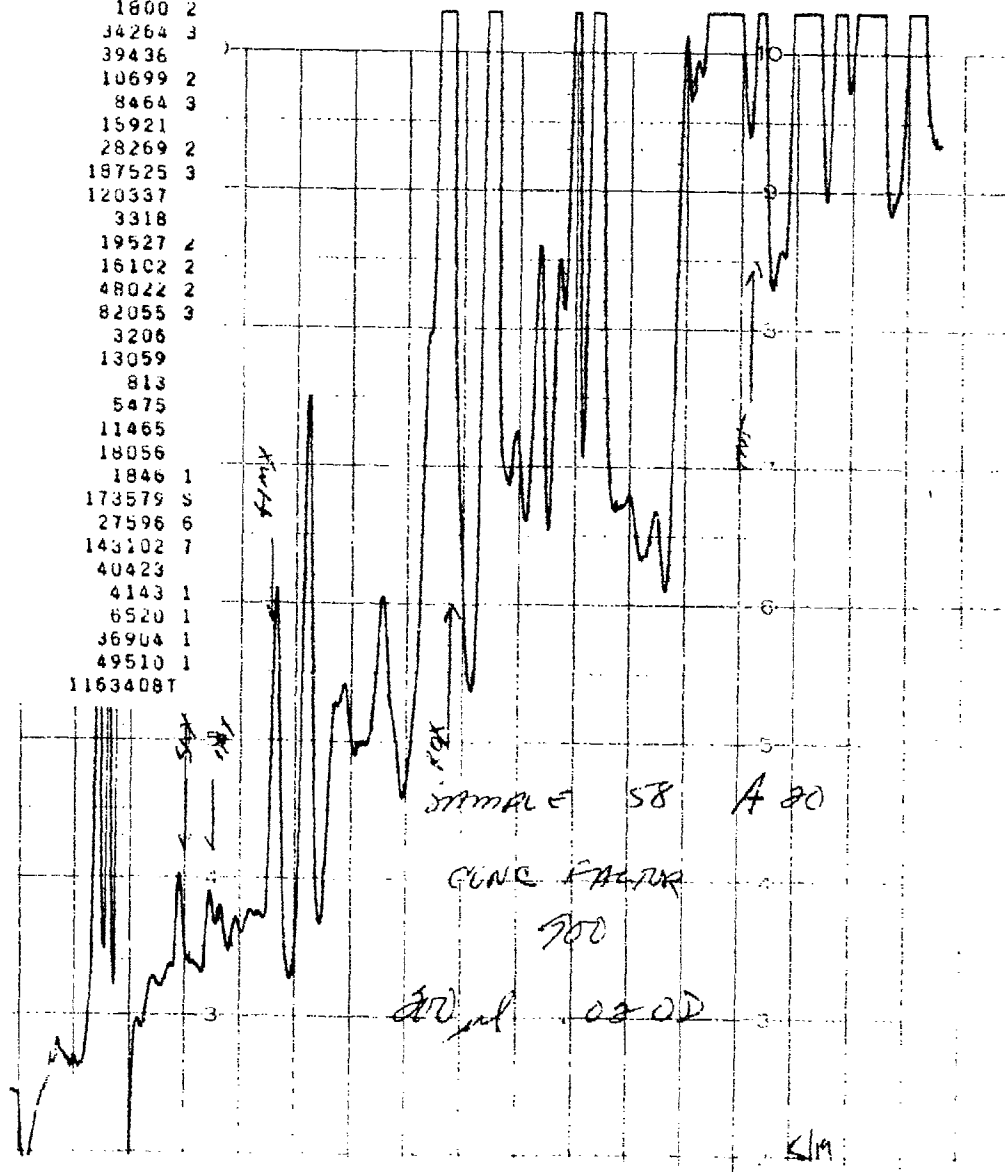


TIME	AREA	
238	14996	2
257	14591	3
335	10890	1
380	48859	1
417	224419	3
501	46678	6
549	17030	6
626	200440	6
664	931	
746	27309	2
780	132897	2
851	23581	3
969	76977	2
1022	75204	2
1063	63824	2
1080	114906	3
1181	1861	1
1249	8618	1
1297	84553	1
1345	70032	2
1418	53926	2
1450	30570	2
1488	38406	3
1572	37858	
1637	21067	2
1669	99799	2
1718	144759	2
1813	78587	3
1870	8071	
1955	311	2
1995	12161	3
2126	51722	2
2152	12386	3
	18482177	

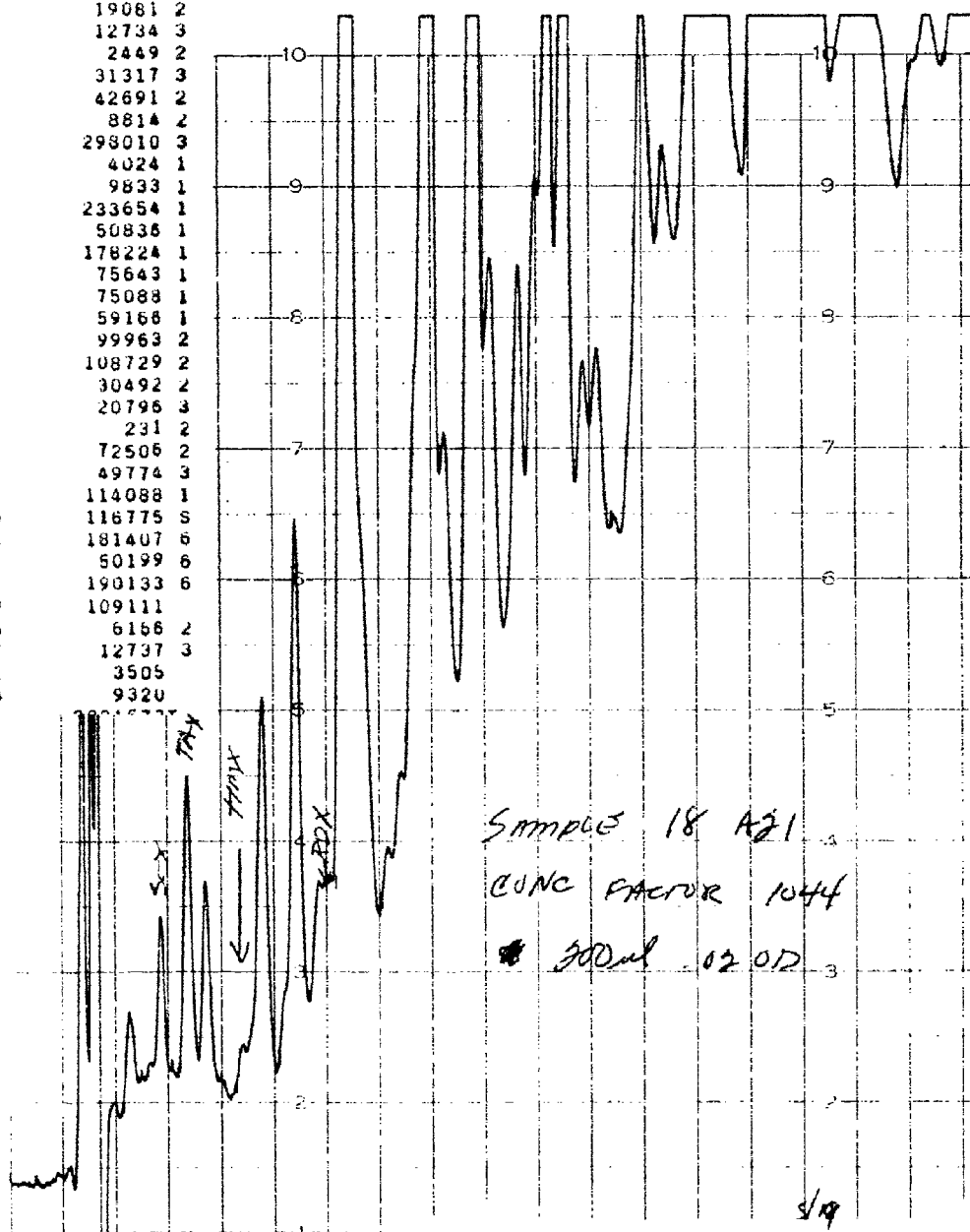


TIME	AREA	
223	2588	2
285	6174	3
352	2338	
373	870	
407	1800	2
493	34264	3
562	39436	
624	10699	2
642	8464	3
725	15921	
825	28269	2
853	187525	3
953	120337	
1014	3318	
1063	19527	2
1106	16102	2
1137	48022	2
1183	82055	3
1321	3206	
1378	13059	
1404	813	
1440	5475	
1476	11465	
1543	18056	
1589	1846	1
1633	173579	5
1716	27596	6
1781	143102	7
1881	40423	
2008	4143	1
2051	6520	1
2110	36904	1
2168	49510	1

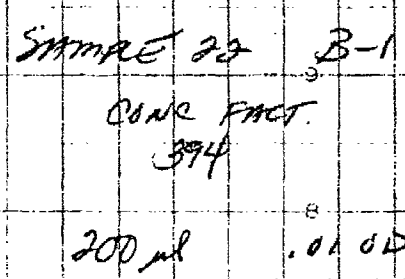
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217	5171
262	495 2
290	8411 3
349	19081 2
393	12734 3
477	2449 2
524	31317 3
599	42691 2
652	8814 2
713	298010 3
809	4024 1
839	9833 1
897	233654 1
940	50836 1
1001	178224 1
1042	75643 1
1106	75088 1
1145	59166 1
1173	99963 2
1209	108729 2
1256	30492 2
1288	20796 3
1323	231 2
1389	72506 2
1437	49774 3
1524	114088 1
1570	116775 5
1653	181407 6
1717	50199 6
1761	190133 6
1869	109111
2005	6166 2
2037	12737 3
2101	3505
2144	9320



TIME
205
266
319
338
352
381
452
496
527
553
696
778



31

TIME
7

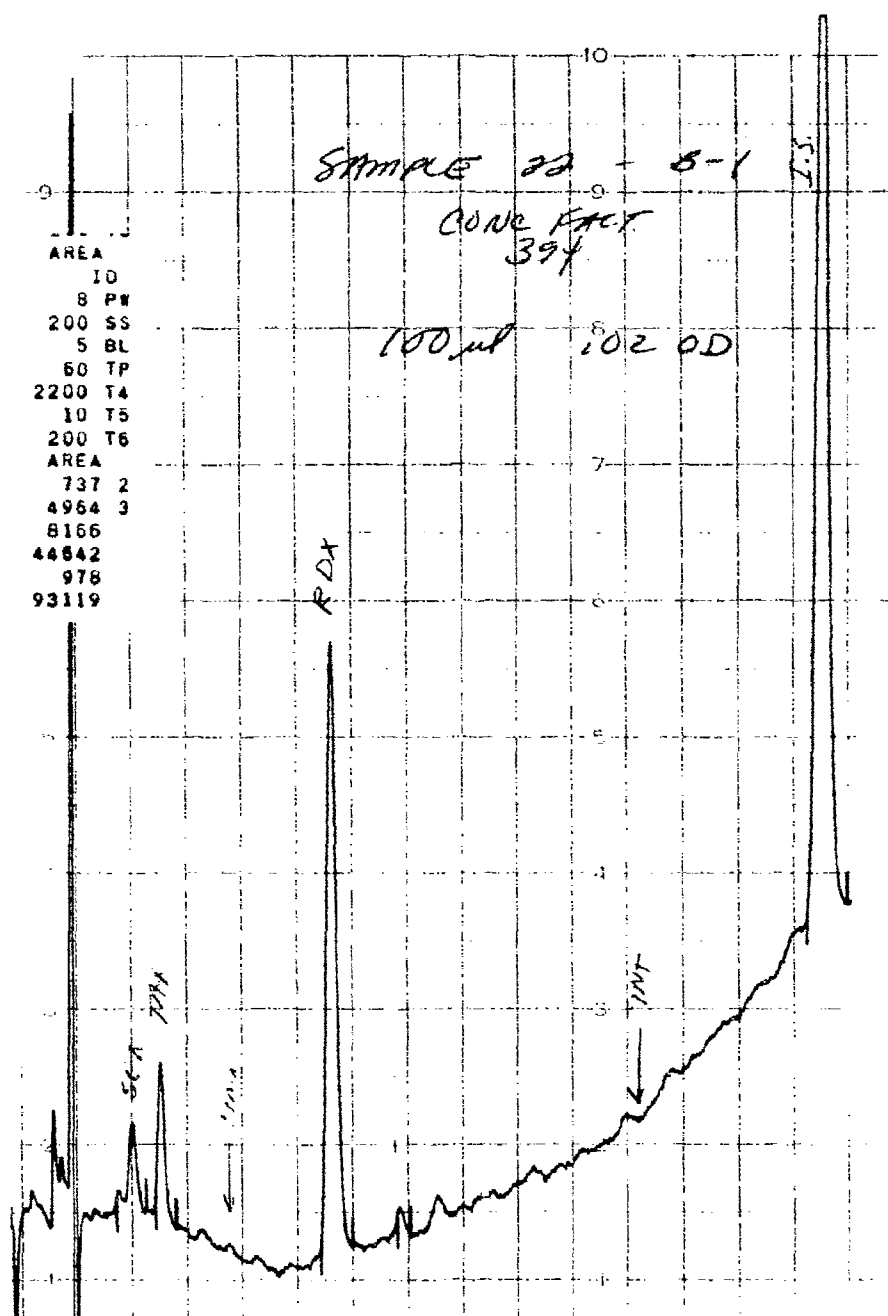
TIME
238
271 2.51
332 4.5
398 7.07 16.1
850
1778

AREA
ID
8 PW
200 SS
5 BL
60 TP
2200 T4
10 T5
200 T6
AREA
737 2
4964 3
8166
44842
978
93119

SAMPLE 22 - 8-1

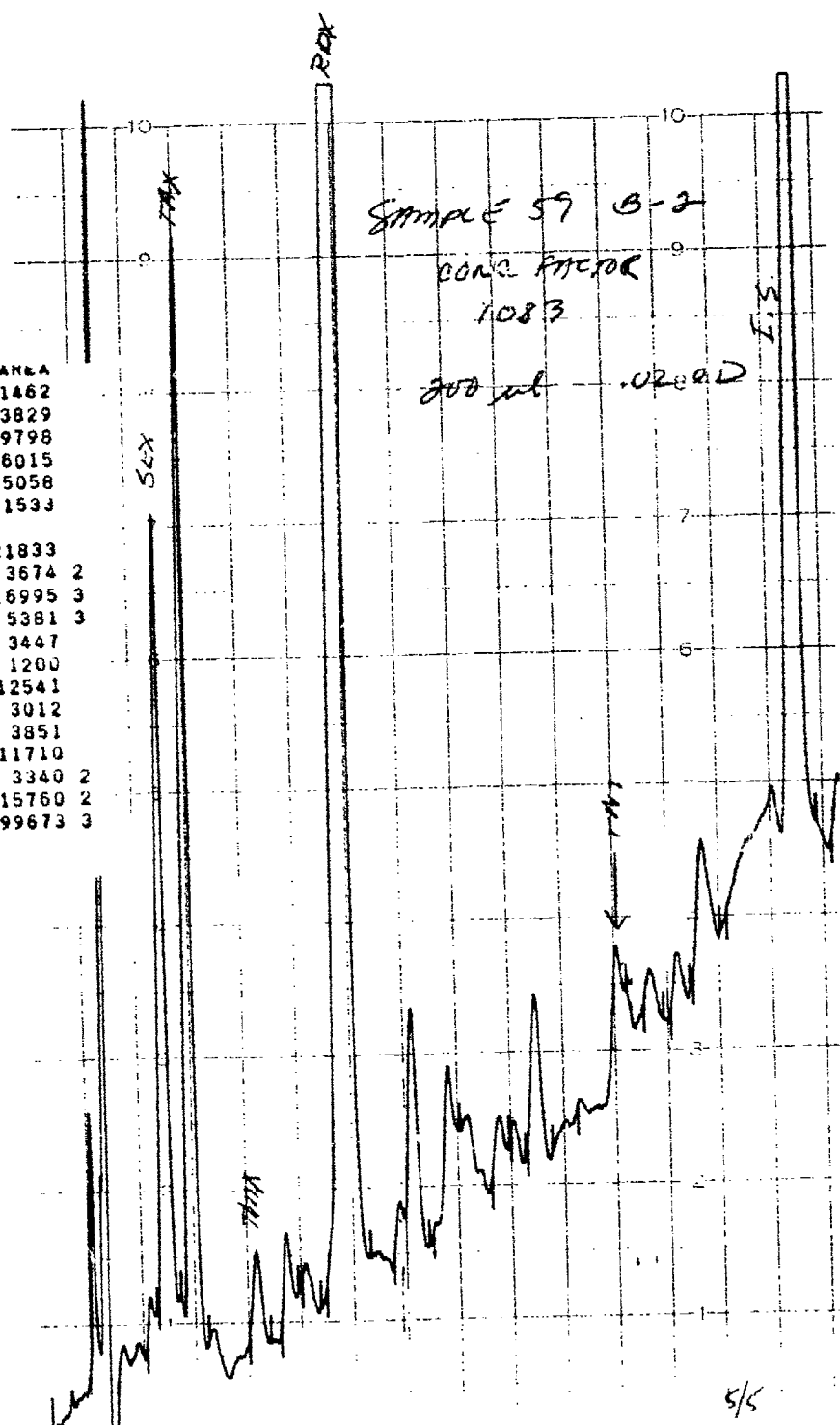
CONC FACT
39%

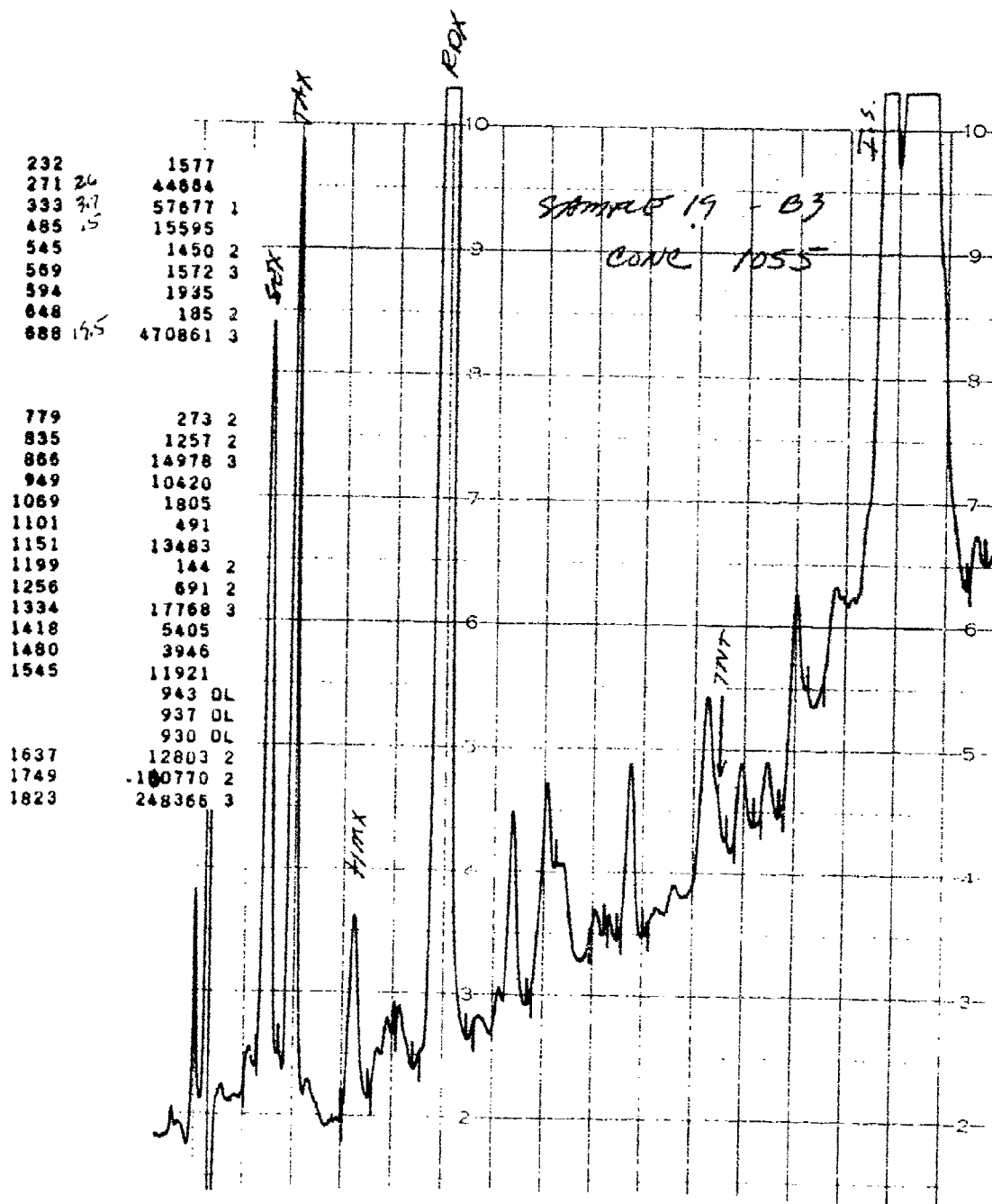
100 ml 102 OD



S/S

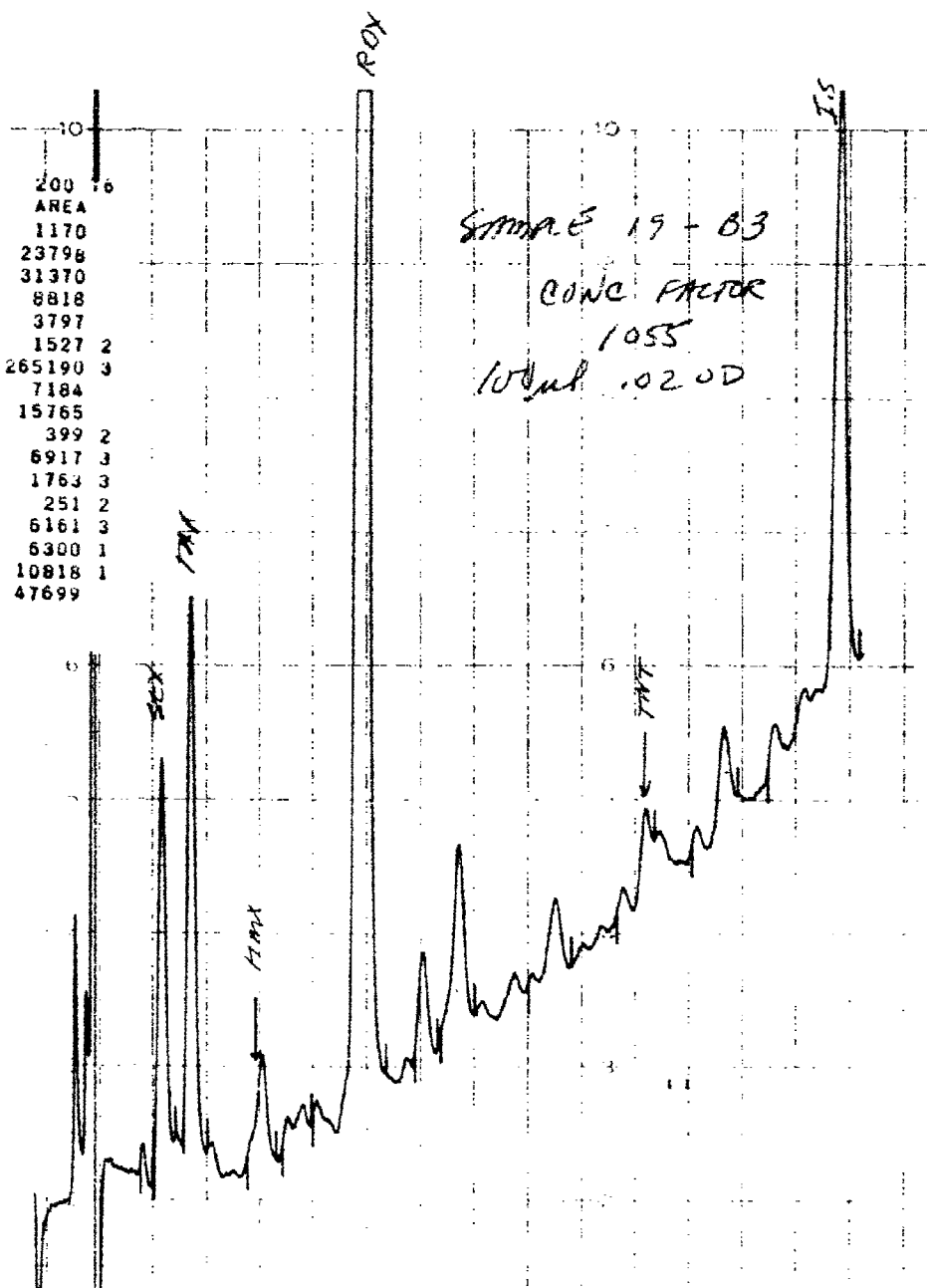
TIME	AREA
230	1462
269 ²⁵	43829
328 ²⁷	59798
475 ²	6015
544	5058
585	1533
676 ¹⁷²	421833
803	3674 2
834	16995 3
917	5381 3
1032	3447
1063	1200
1117	12541
1378	3012
1442	3851
1501	11710
1591	3340 2
1666	15760 2
1720	99673 3



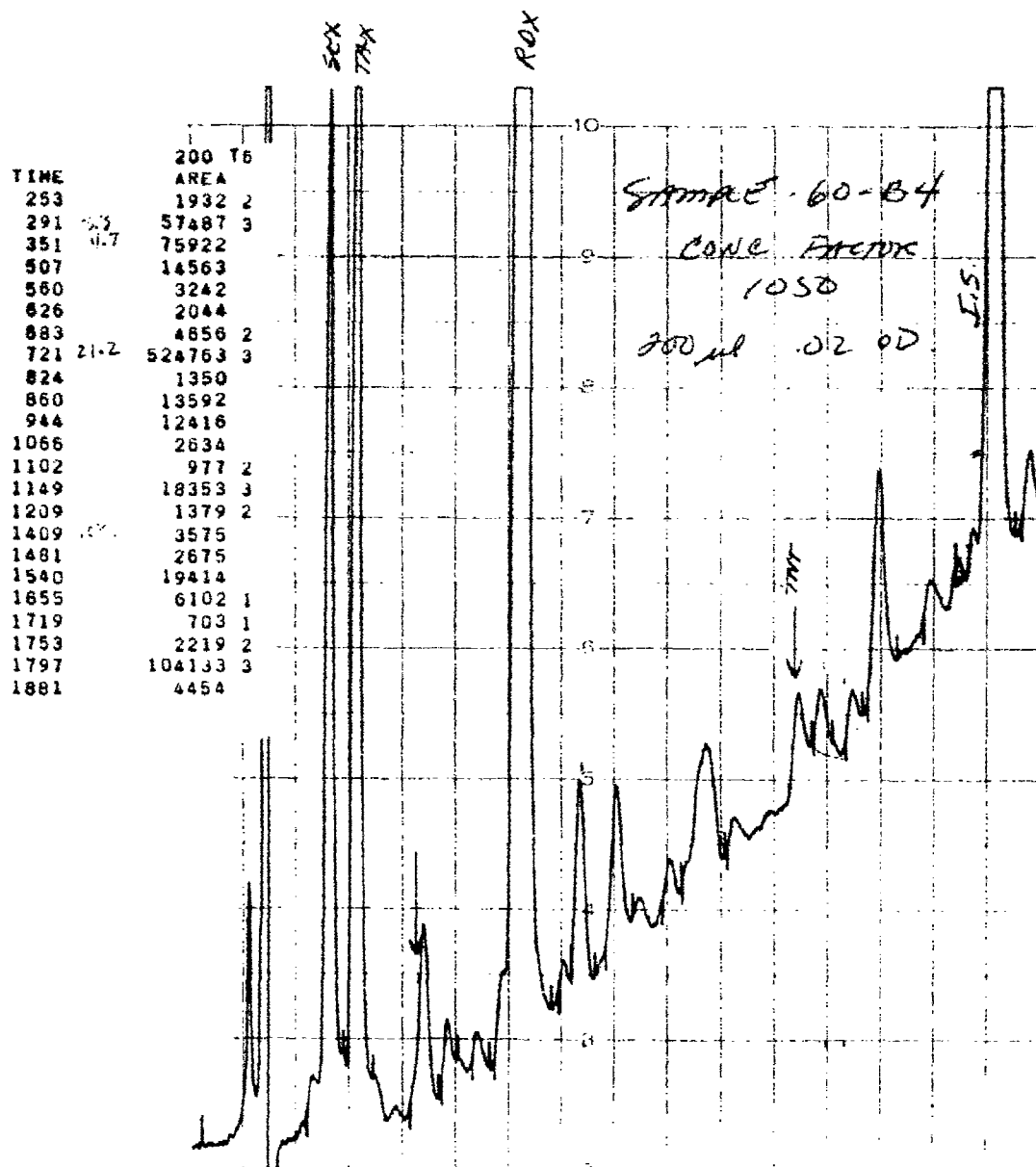


5/5

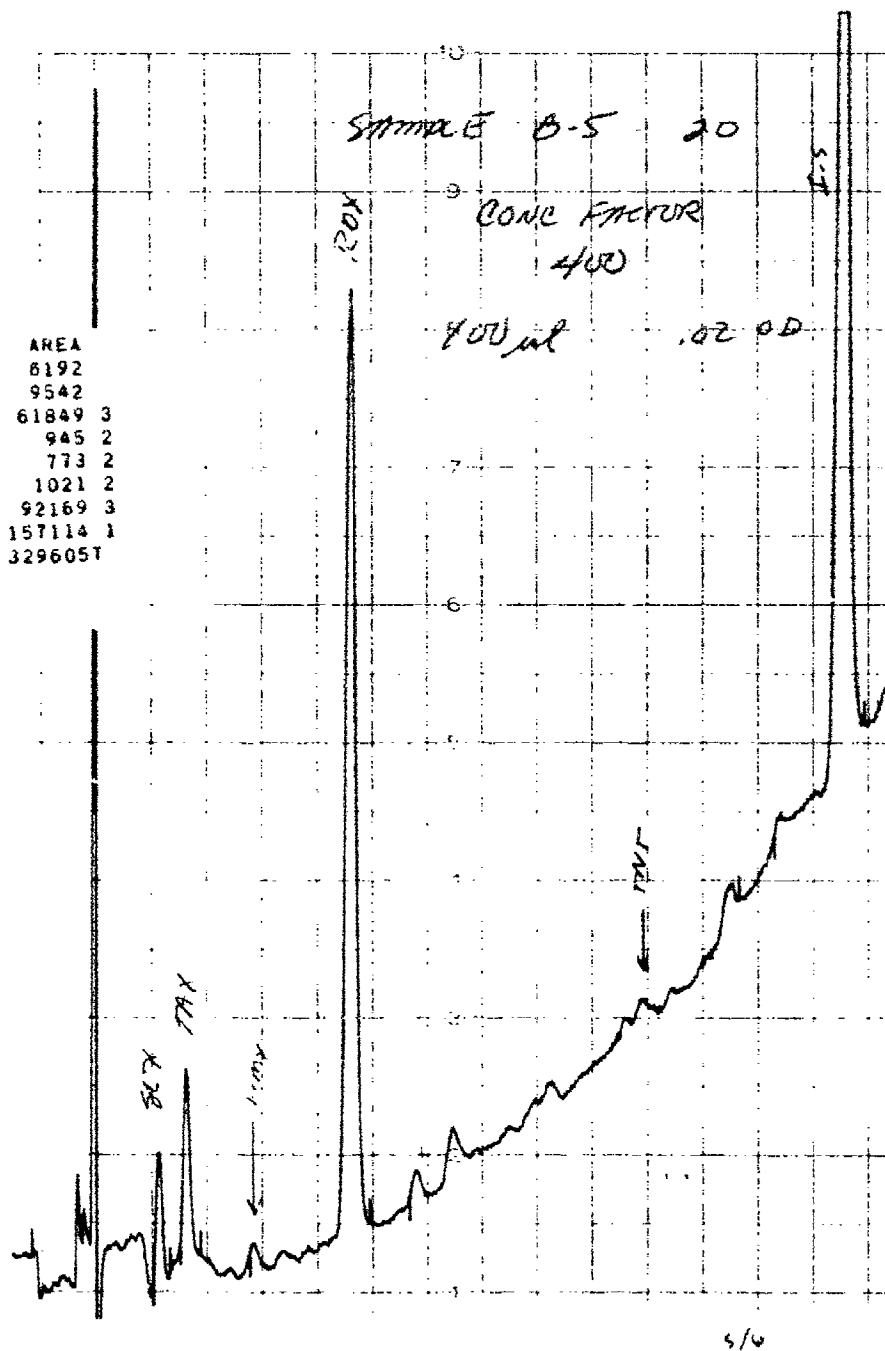
TIME	AREA
261	1170
304 2.9	23798
369 4.2	31370
533	8818
589	3797
654	1527 2
755 7.2	265190 3
894	7184
977	15765
1134	399 2
1193	6917 3
1397 10.1	1763 3
1509	251 2
1572	6161 3
1685	6300 1
1753	10818 1
1833	47699



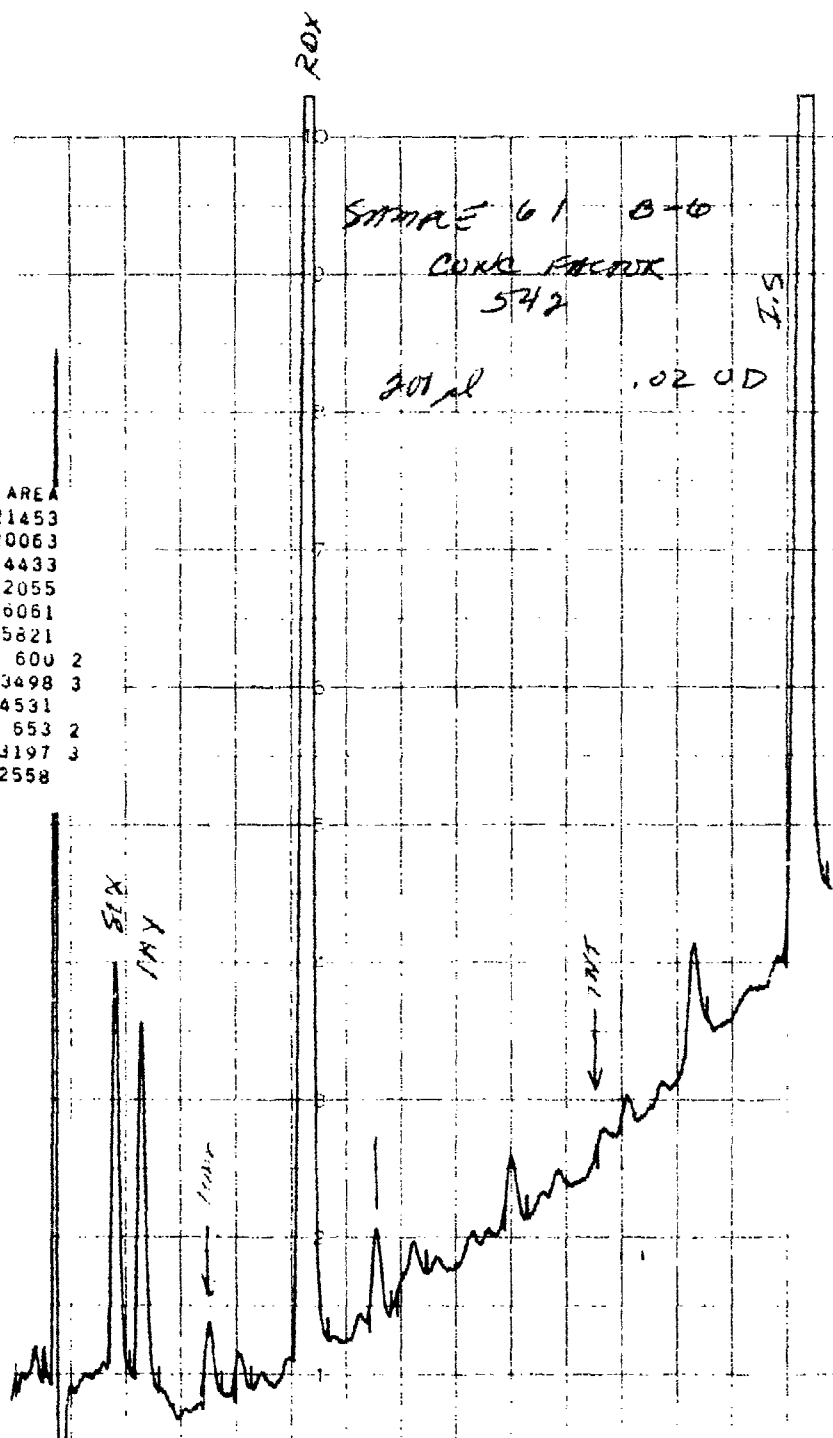
5/6



TIME		AREA
285	5.2	8192
344	5.2	9542
702		61849 3
844		945 2
926		773 2
1638		1021 2
1777	21.7	92169 3
2193		157114 1
		3296051

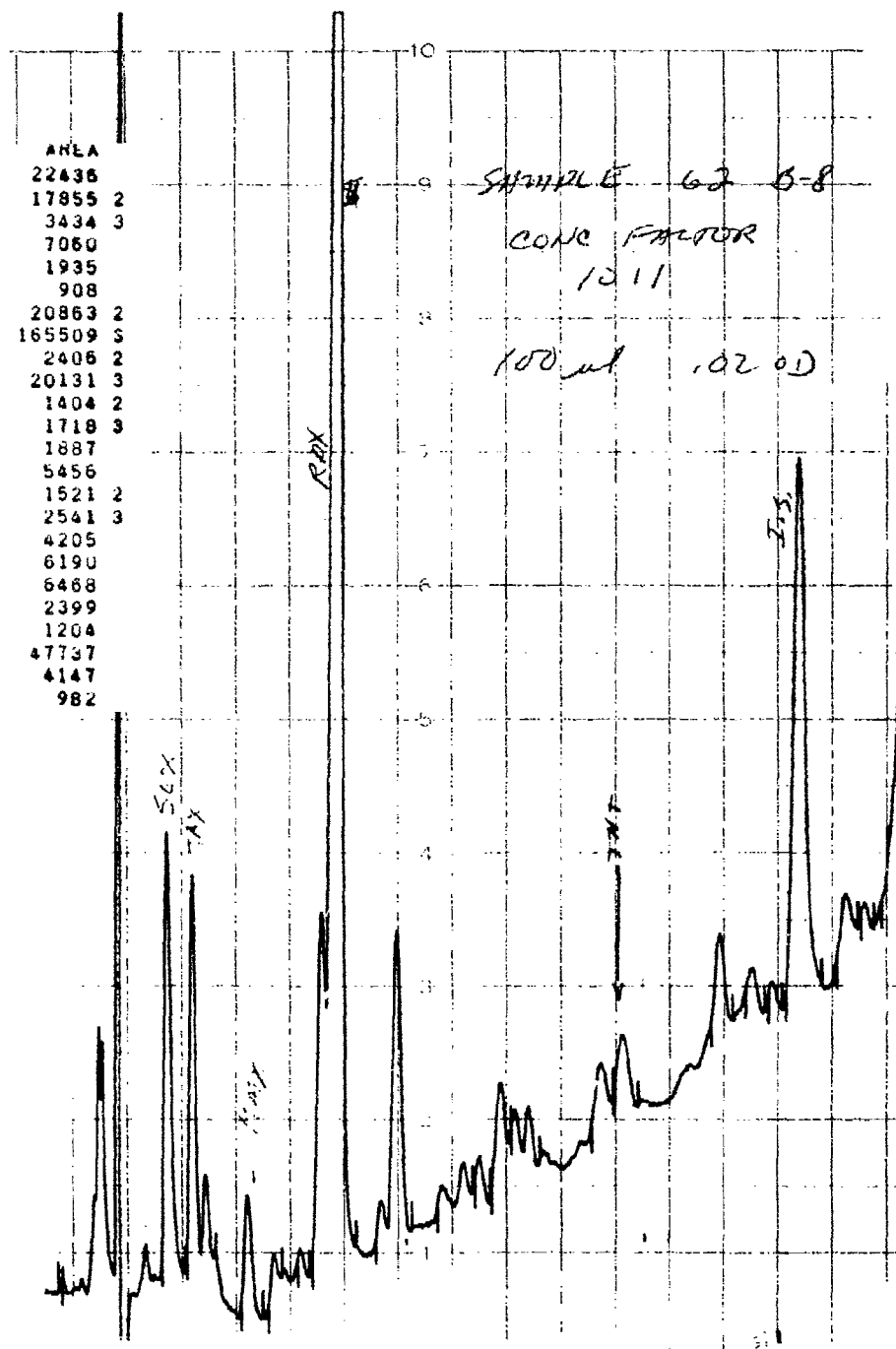


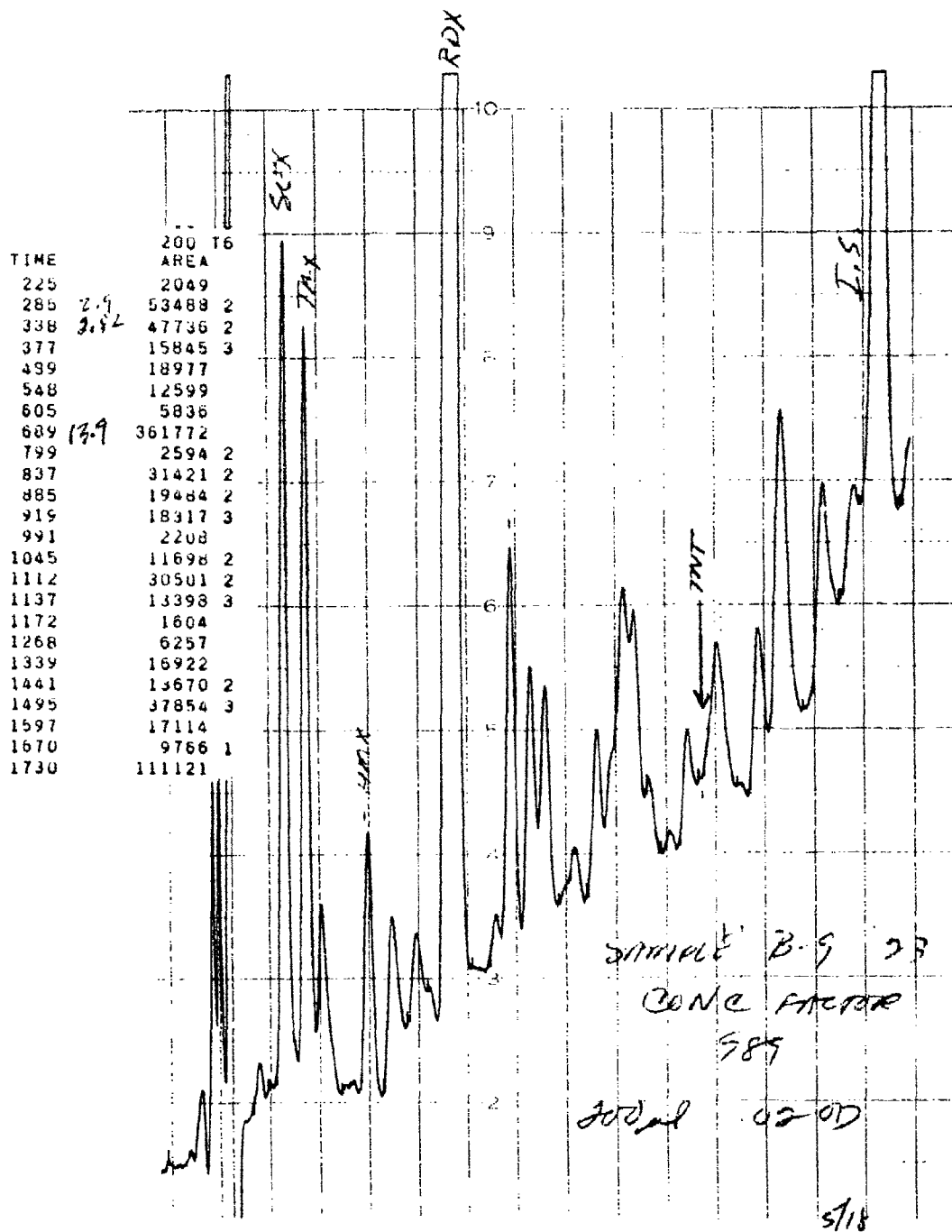
TIME		AREA
272	4.7	21453
330	7.7	20063
476		4433
540		2055
686	15.4	66061
841		5821
896		600 2
923		3498 3
1137		4531
1334	.025	653 2
1538		3197 3
1772		202558



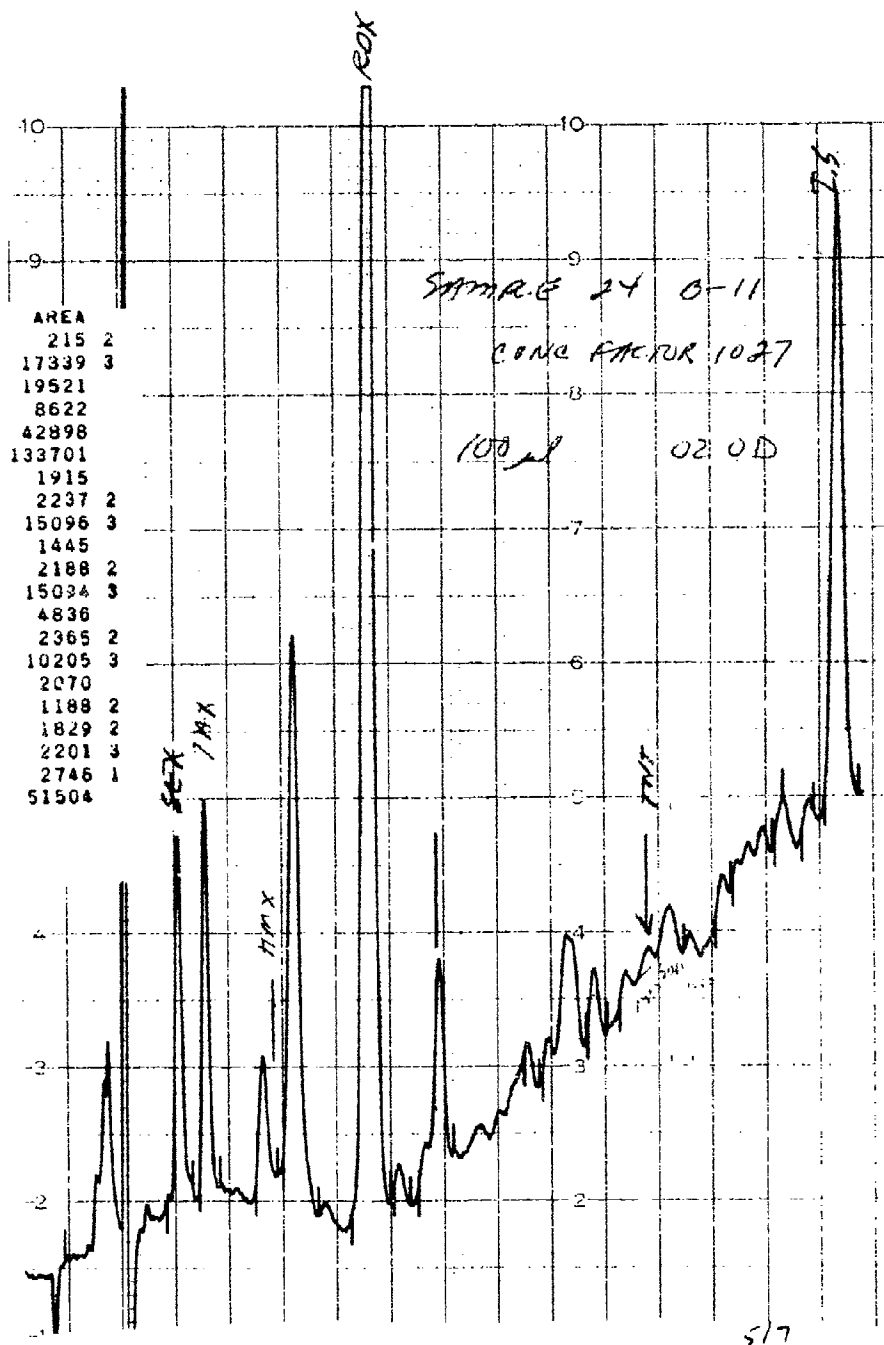
2/6

TIME		AREA
242	2.8	22436
298	2.4	17855 2
329		3434 3
422		7060
480		1935
538		908
586		20863 2
615	14.4	165509 3
718		2406 2
755		20131 3
856		1404 2
902		1718 3
938		1887
986		5456
1017		1521 2
1047		2541 3
1206		4205
1253		6190
1467		6468
1537		2399
1581		1204
1642		47737
1746		4147
1788		982

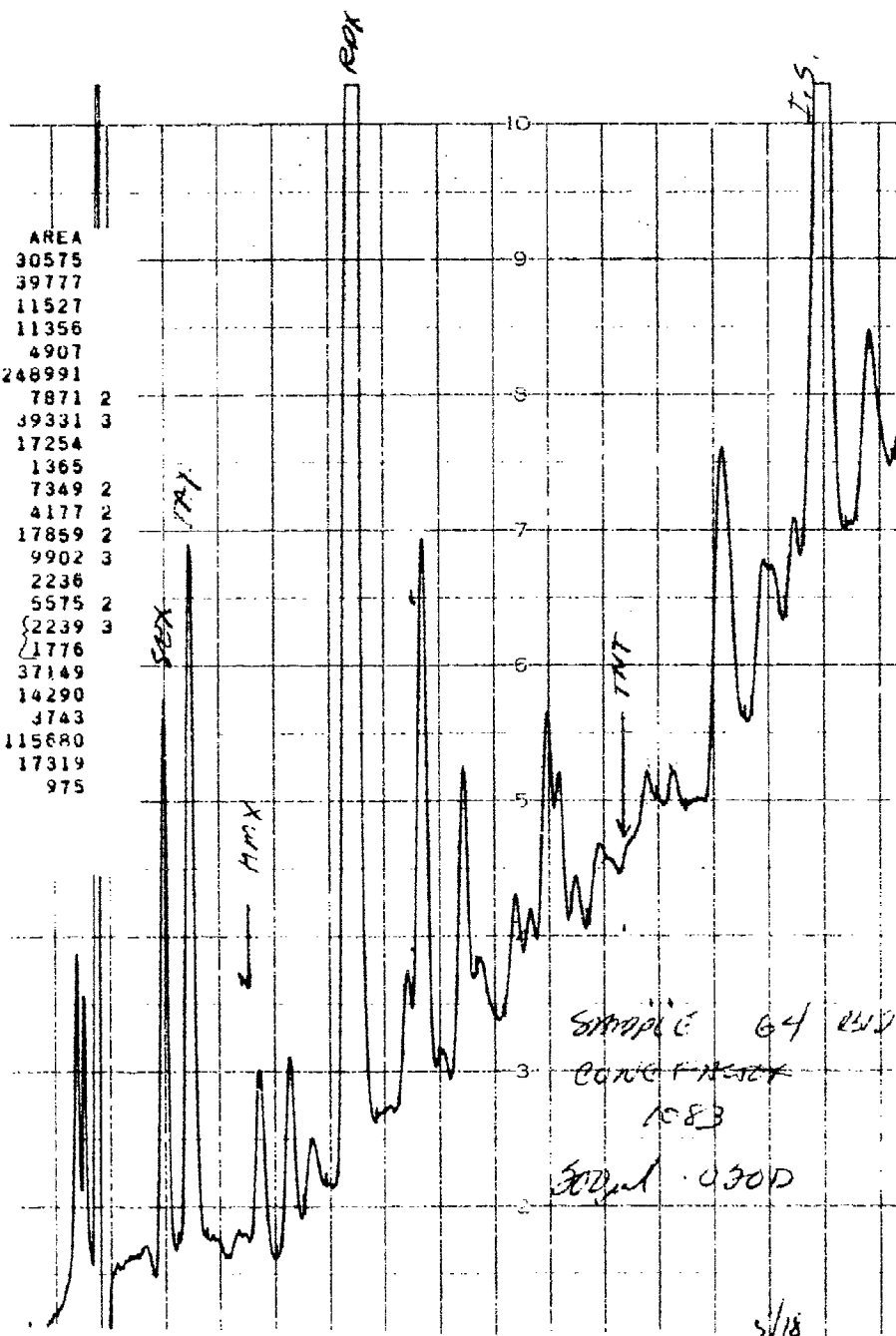




TIME	AREA
234	215 2
257 2.0	17339 3
317 2.4	19521
446	8622
516	42898
682 10.4	133701
750	1915
812	2237 2
842	15096 3
1040	1445
1088	2188 2
1130	15034 3
1193	4836
1281	2365 2
1356	10205 3
1480	2070
1512	1188 2
1538	1829 2
1568	2201 3
1669	2746 1
1738	51504

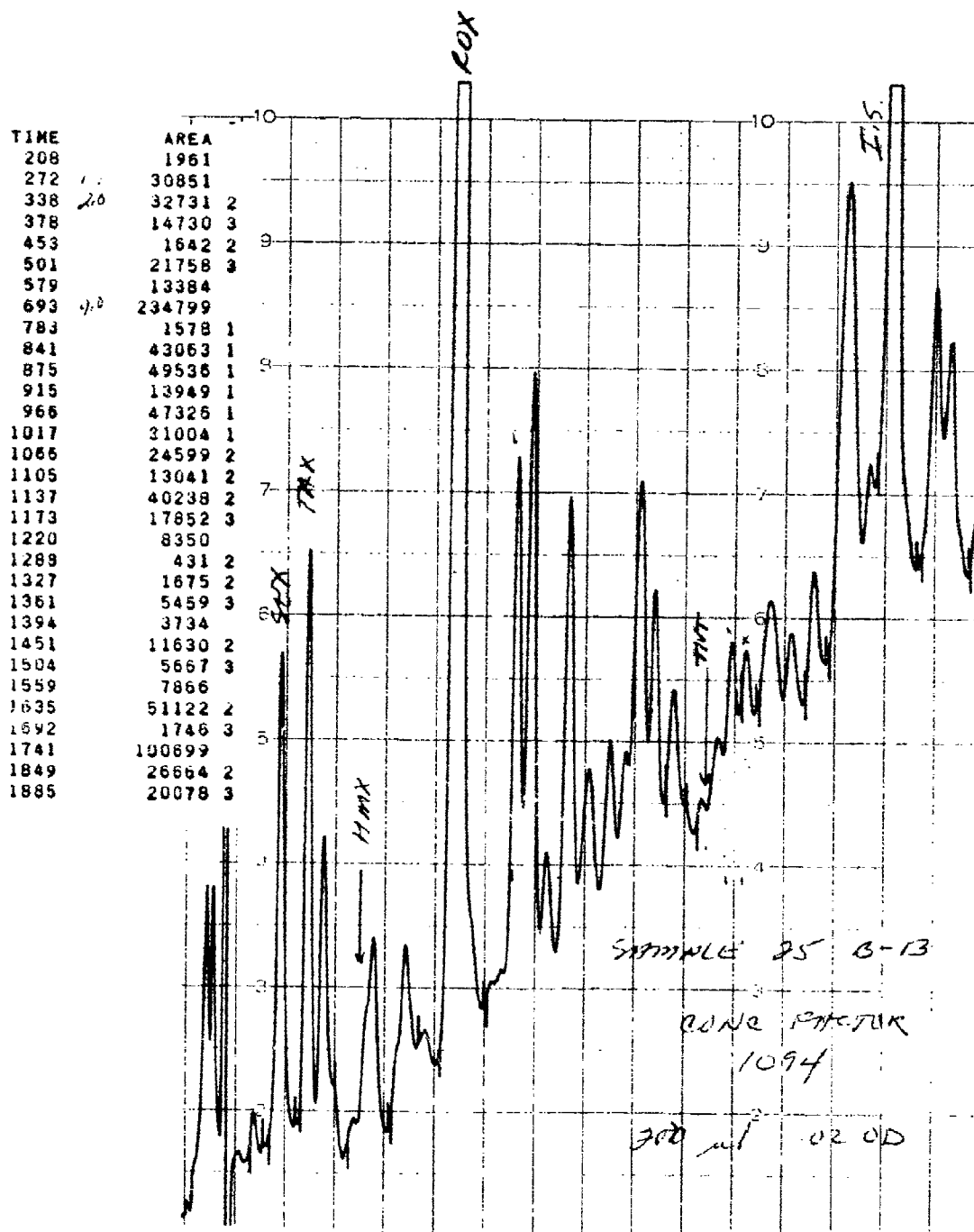


TIME	AREA
299	30575
356	39777
512	11527
578	11356
626	4907
709	248991
836	7871 2
869	39331 3
958	17254
993	1365
1073	7349 2
1105	4177 2
1142	17859 2
1168	9902 3
1205	2236
1256	5575 2
1363	{2239 3
1419	{1776
1529	37149
1621	14290
1686	3743
1745	115680
1849	17319
1913	975

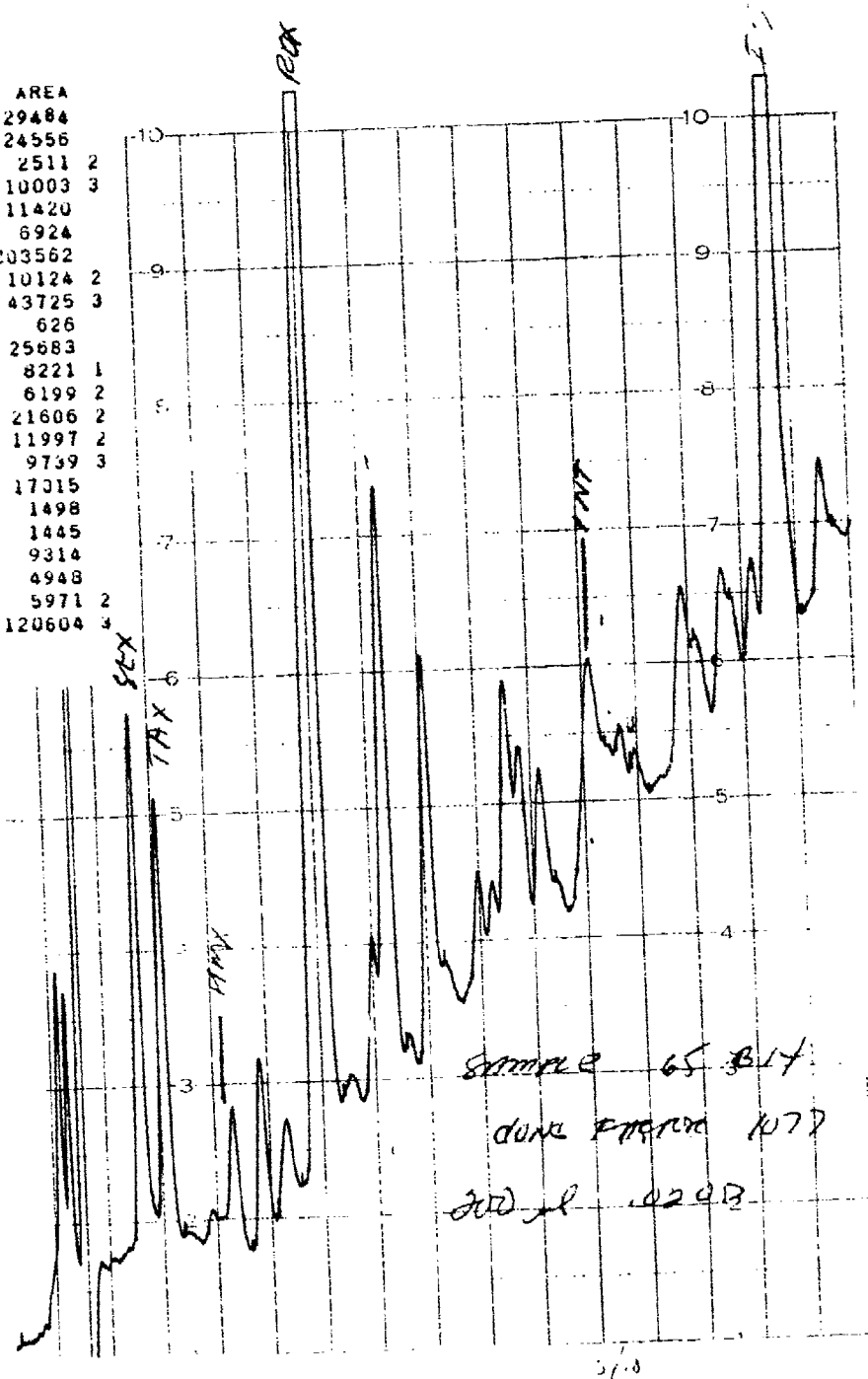


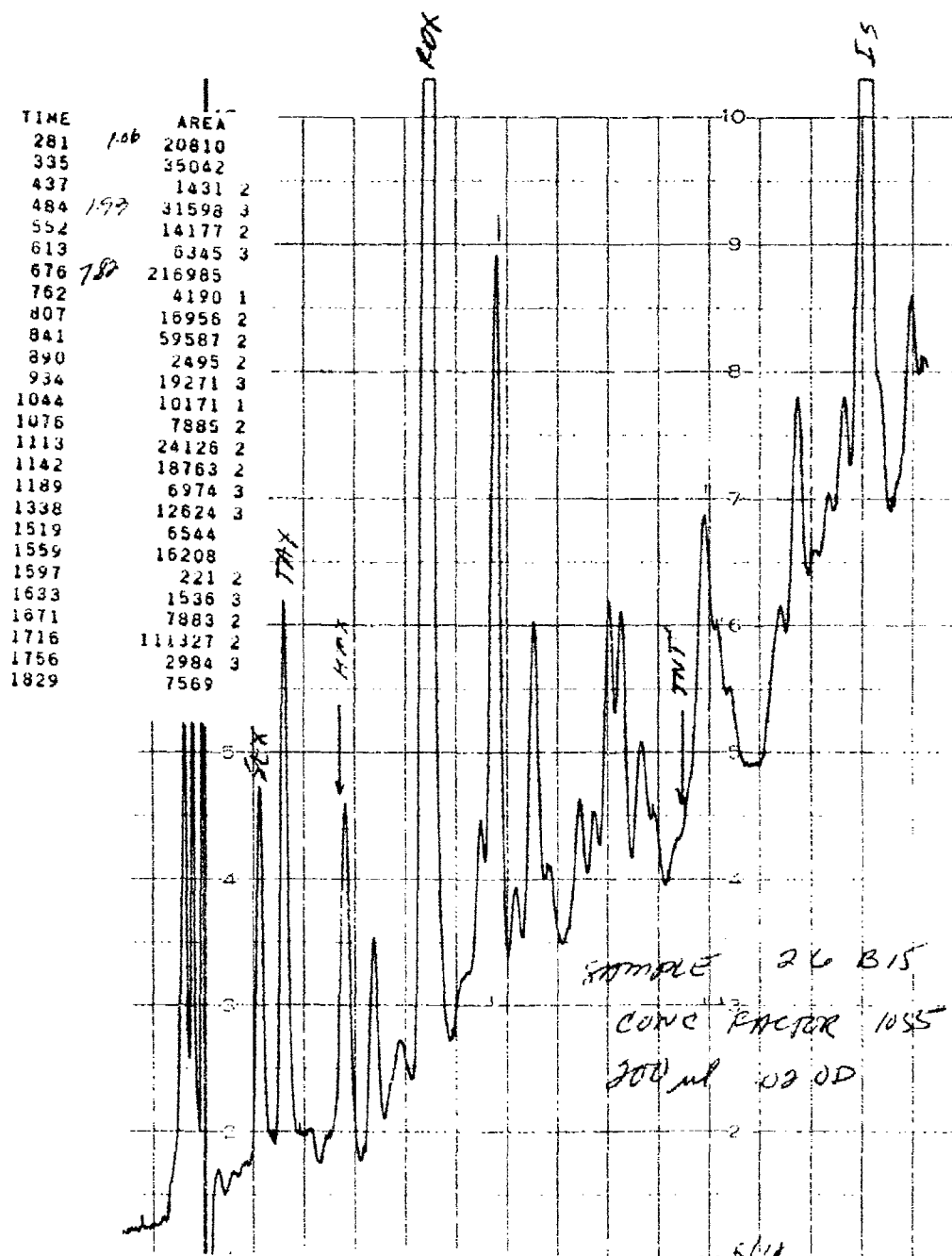
SAMPLE 64 RSD
 CONC FASTER
 1083
 500ul .030D

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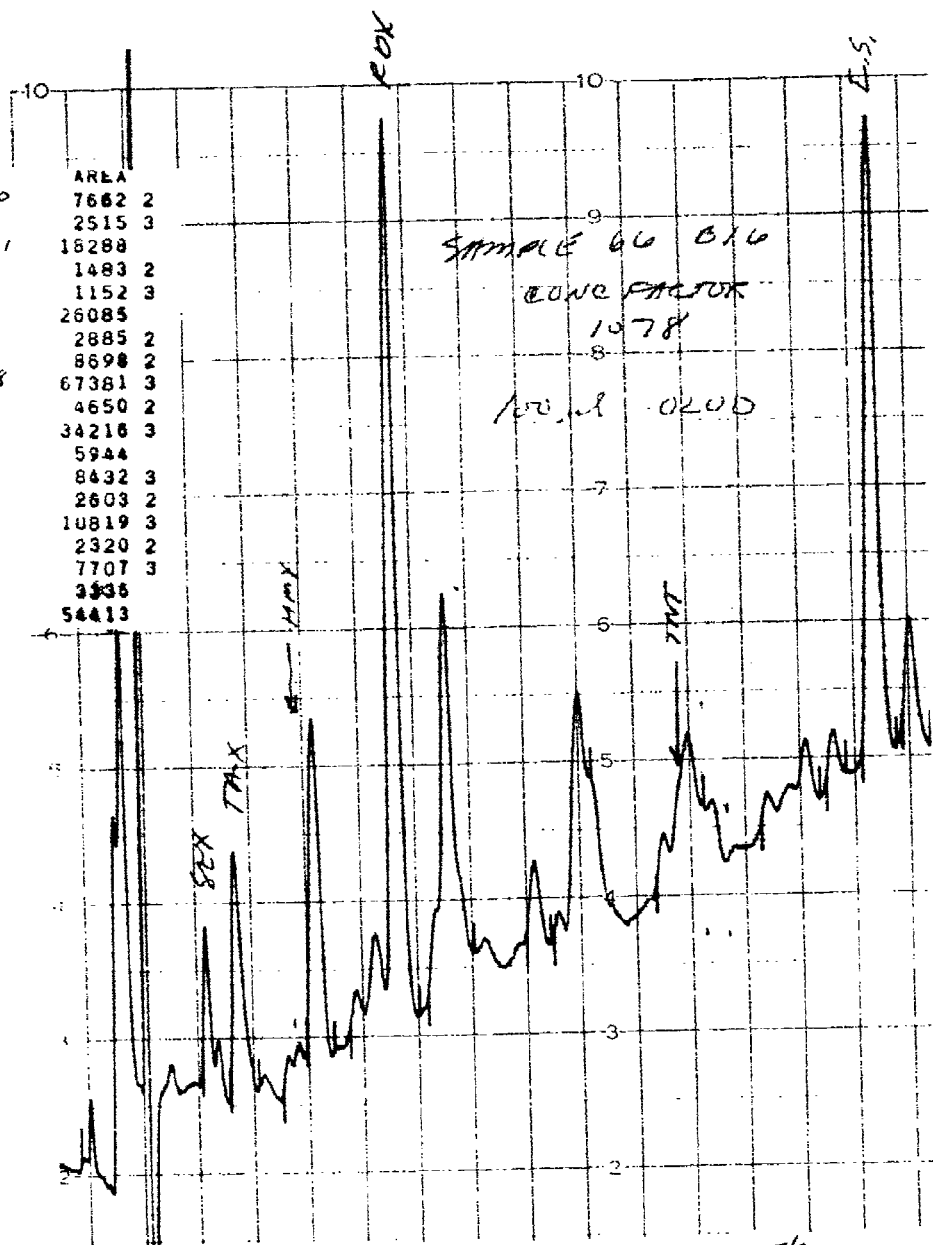


TIME		AREA
280	1.63	29484
334	1.48	24556
434		2511 2
485		10003 3
549		11420
605		6924
682	2.01	203562
809		10124 2
843		43725 3
885		626
936		25683
1048		8221 1
1081		6199 2
1118		21606 2
1146		11997 2
1192		9739 3
1307		17015
1372		1498
1403		1445
1517		9314
1605		4948
1672		5971 2
1721		120604 3





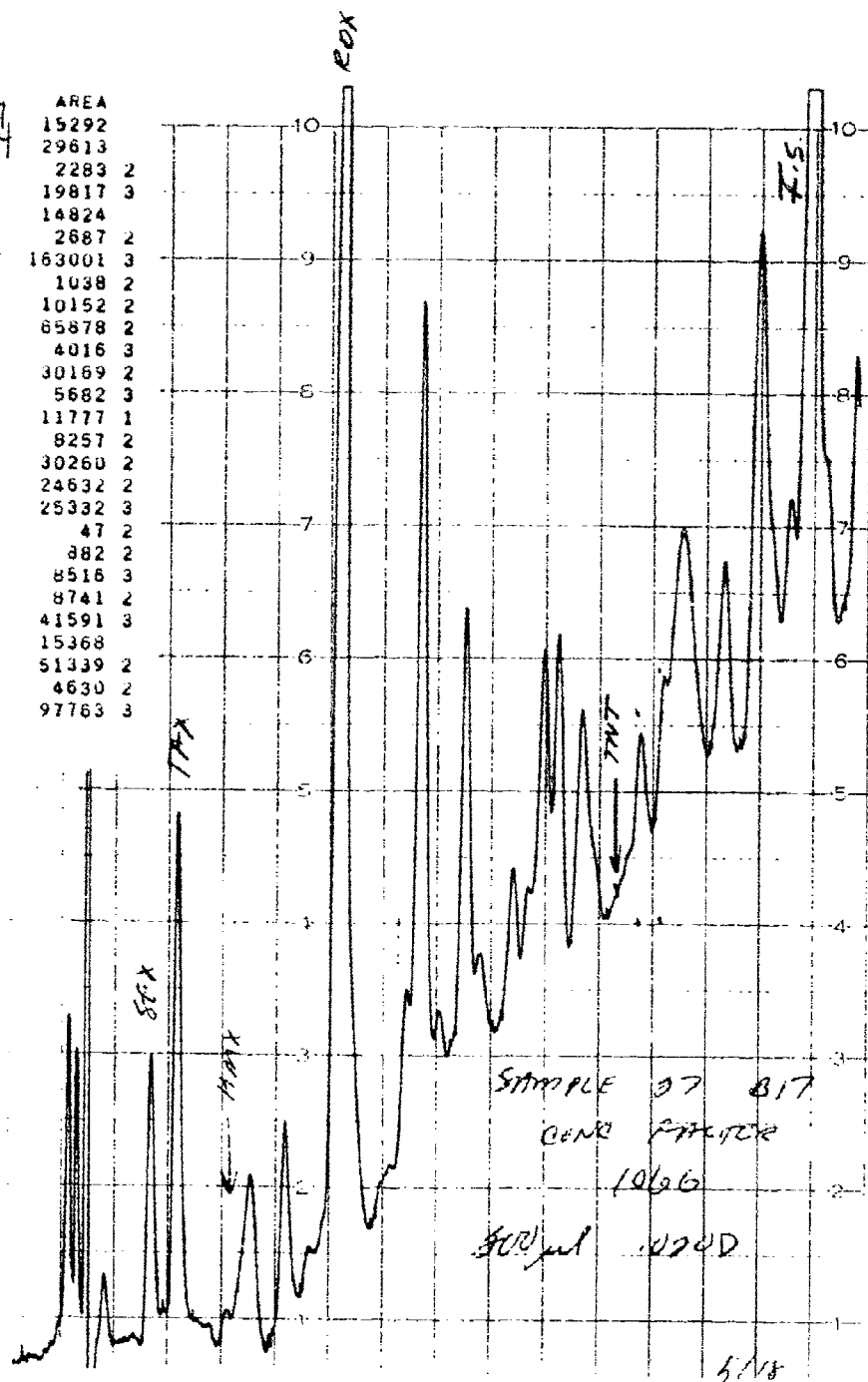
TIME	AREA
280 .50	7662 2
305	2515 3
346 2.1	18288
458	1483 2
481	1152 3
520	26085
606	2885 2
650	8698 2
698 4.8	67381 3
735	4650 2
813	34218 3
1005	5944
1108	8432 3
1288	2603 2
1345	10819 3
1516	2320 2
1601	7707 3
1661	3336
1754	54413



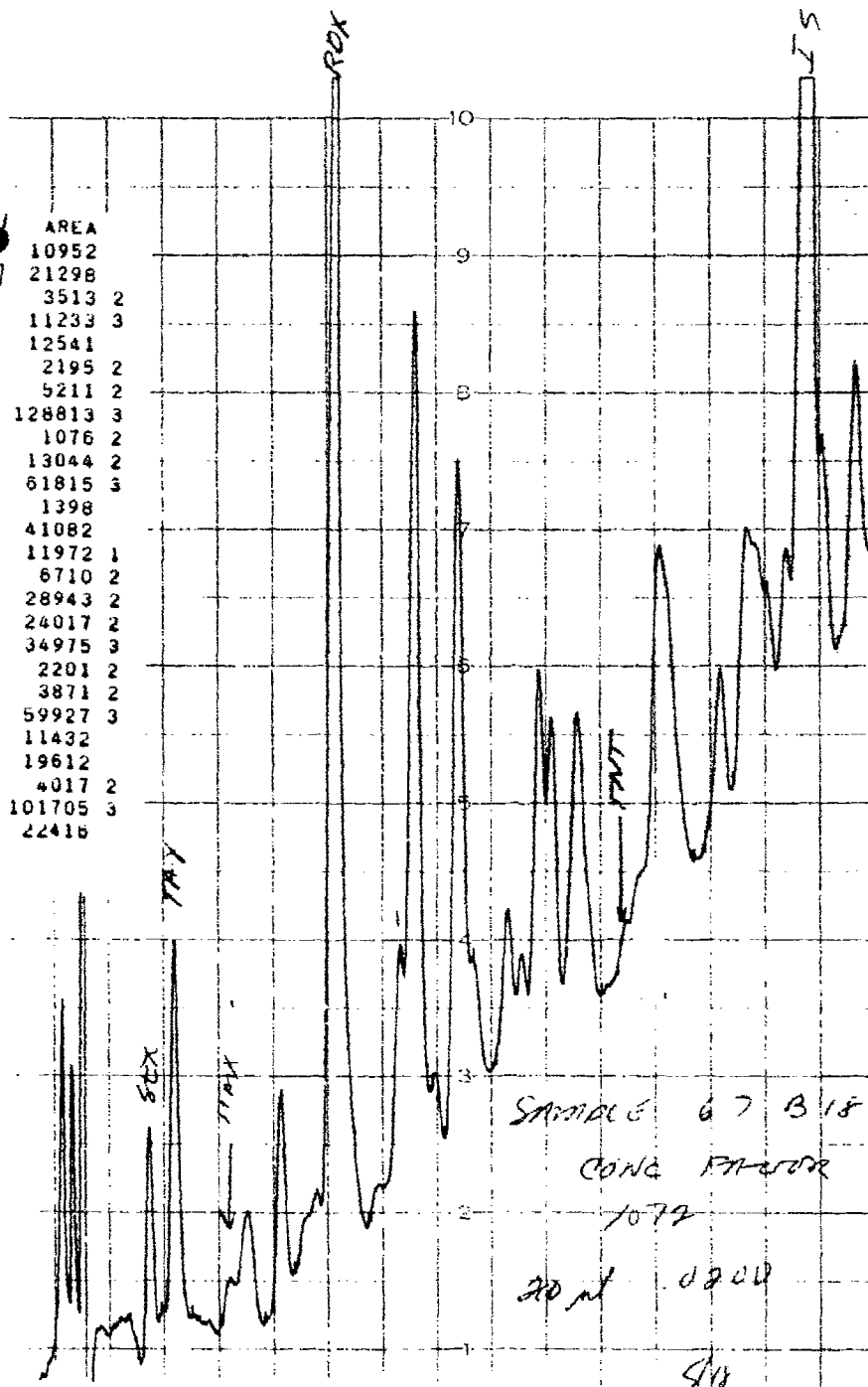
SAMPLE 66 B16
 CONC FACTOR
 1078
 100.0 0200

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TIME	AREA
291	15292
349	29613
458	2283 2
517	19817 3
592	14824
645	2887 2
709	163001 3
807	1038 2
862	10152 2
893	65878 2
936	4016 3
993	30169 2
1025	5682 3
1100	11777 1
1133	9257 2
1169	30260 2
1201	24632 2
1256	25332 3
1337	47 2
1363	382 2
1387	8516 3
1439	8741 2
1480	41591 3
1573	15368
1649	51339 2
1720	4630 2
1780	97763 3

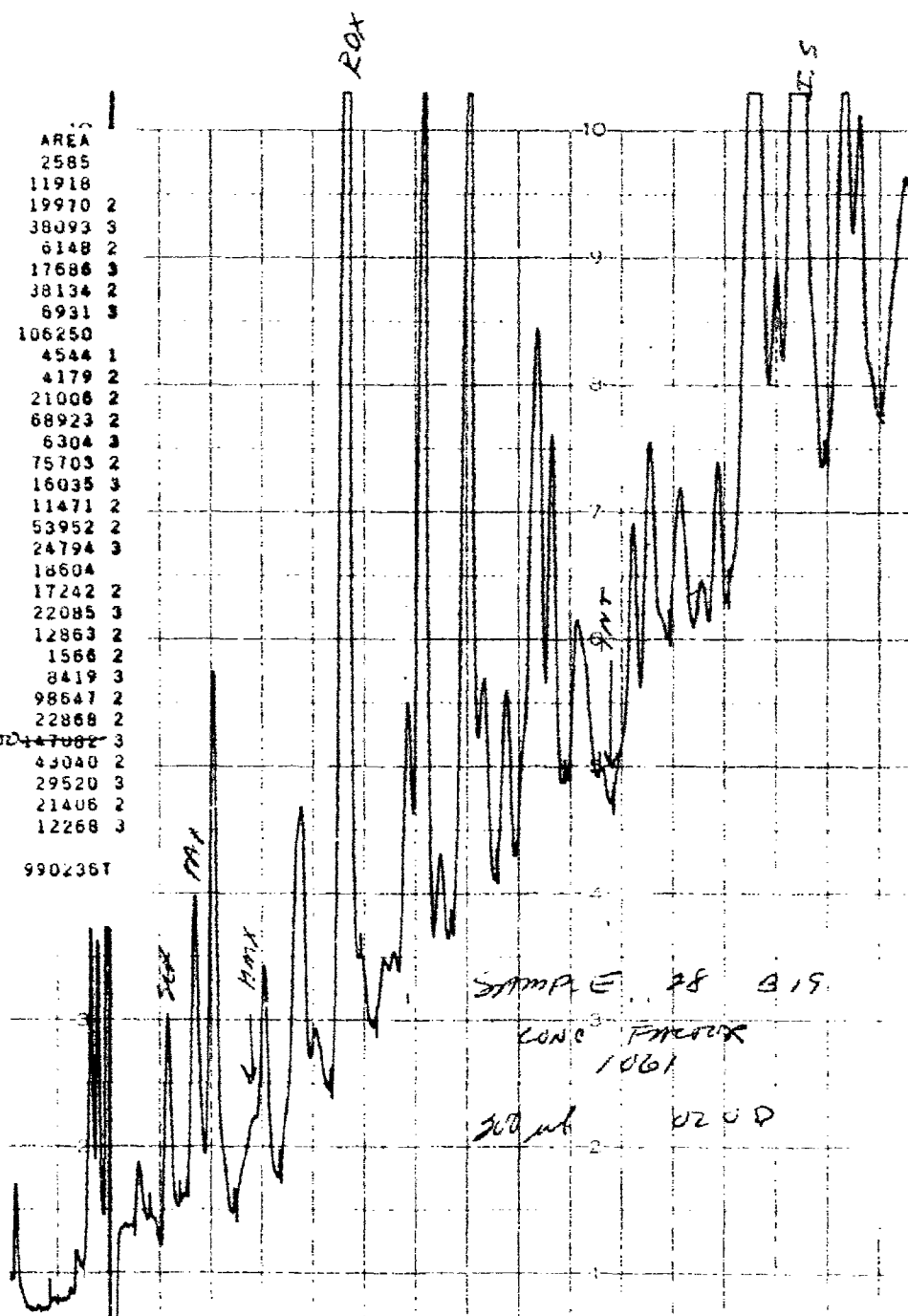


TIME	AREA
292	10952
349	21298
465	3513 2
509	11233 3
583	12541
636	2195 2
660	5211 2
699	128813 3
791	1076 2
846	13044 2
877	61815 3
919	1398
973	41082
1082	11972 1
1113	6710 2
1151	28943 2
1178	24017 2
1234	34975 3
1341	2201 2
1371	3871 2
1417	59927 3
1552	11432
1611	19612
1697	4017 2
1738	101705 3
1852	22416



TIME	AREA
211	2585
278	11918
340	19970 2
382	38093 3
477	6148 2
506	17686 3
591	38134 2
627	6931 3
693	106250
788	4544 1
809	4179 2
844	21006 2
877	68923 2
921	6304 3
984	75703 2
1021	16035 3
1075	11471 2
1144	53952 2
1181	24794 3
1239	18604
1370	17242 2
1409	22085 3
1479	12863 2
1530	1566 2
1567	8419 3
1645	98547 2
1702	22868 2
1748	100000 3
1857	43040 2
1895	29520 3
2002	21406 2
2037	12268 3

990236T



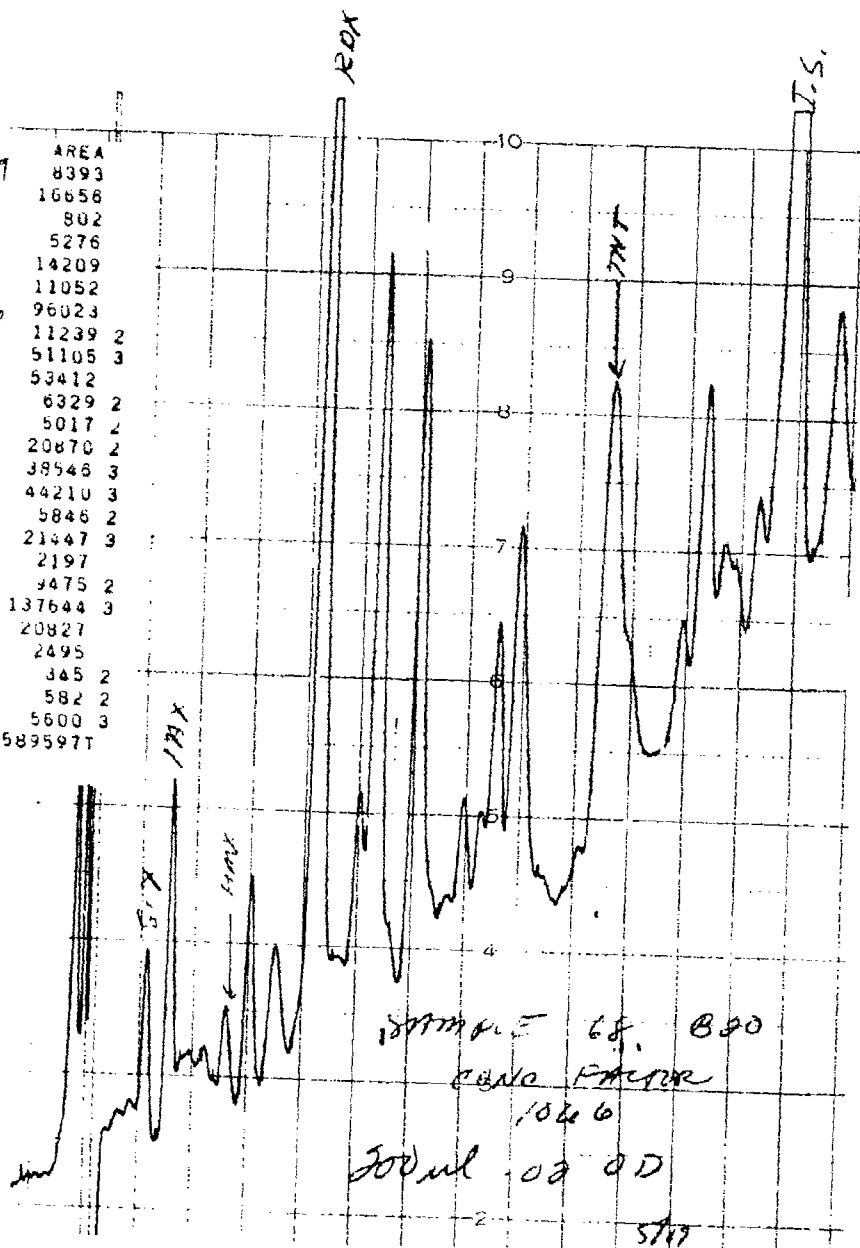
SAMPLE 28 319

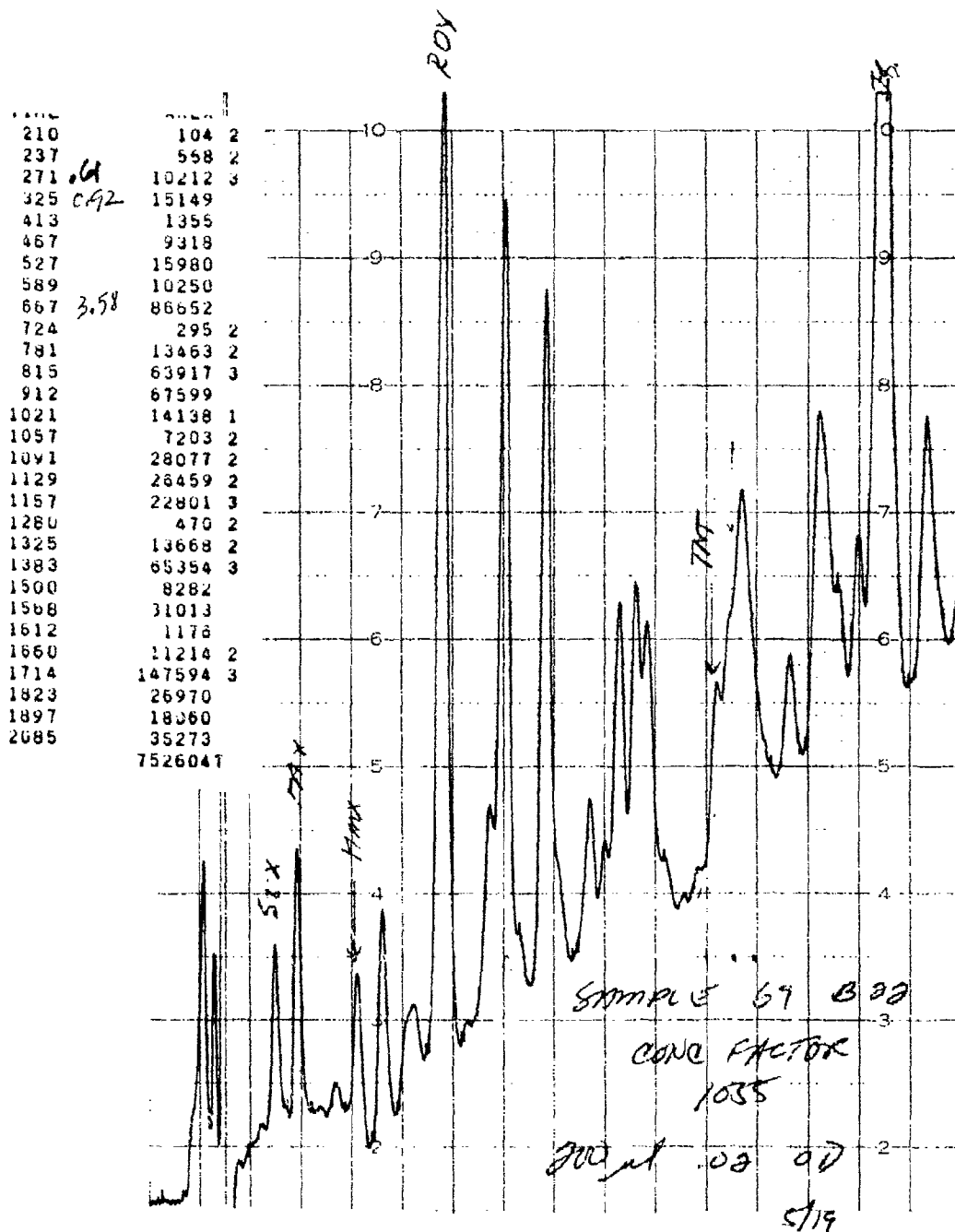
CONC FINDER
1061

2000 0200

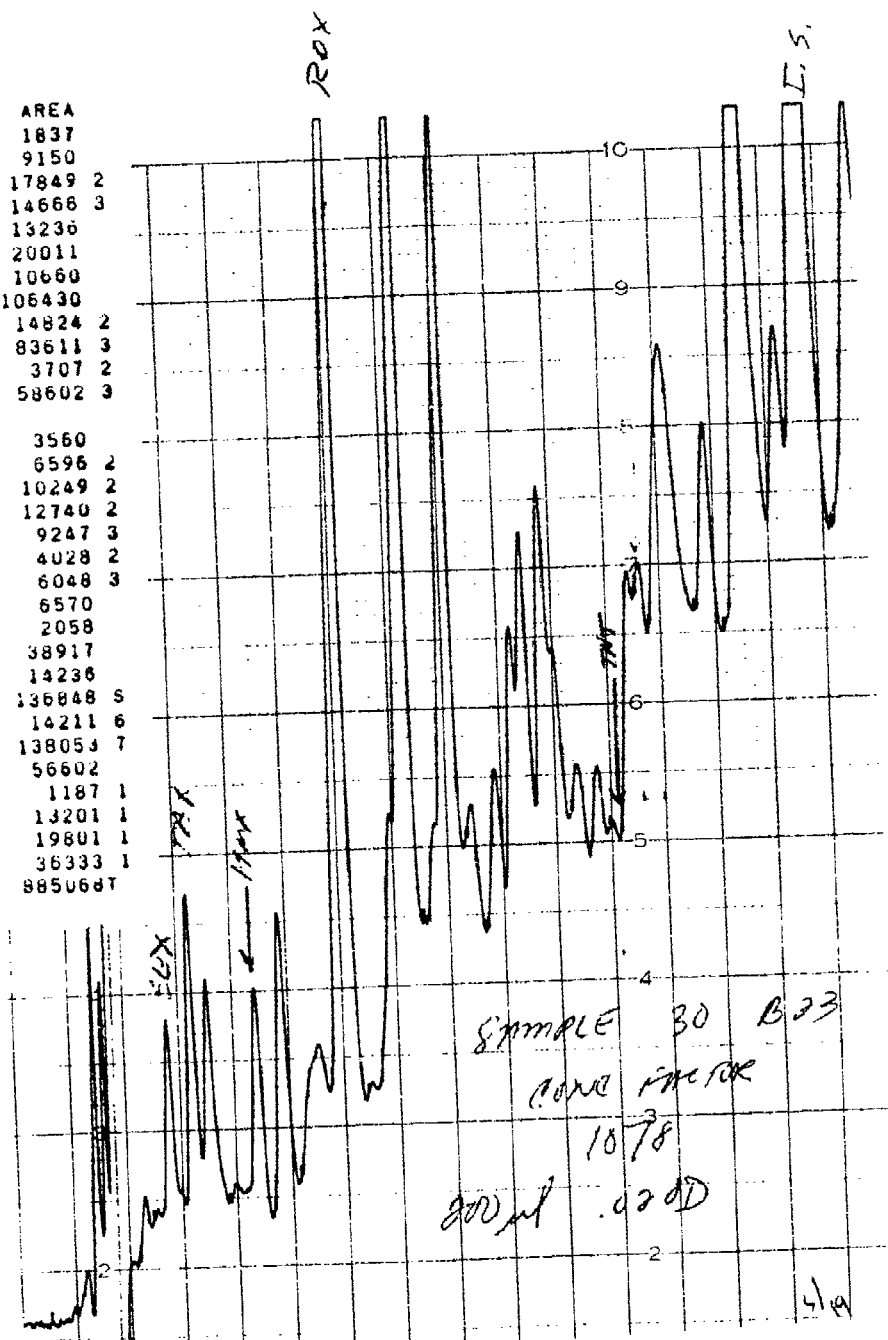
64

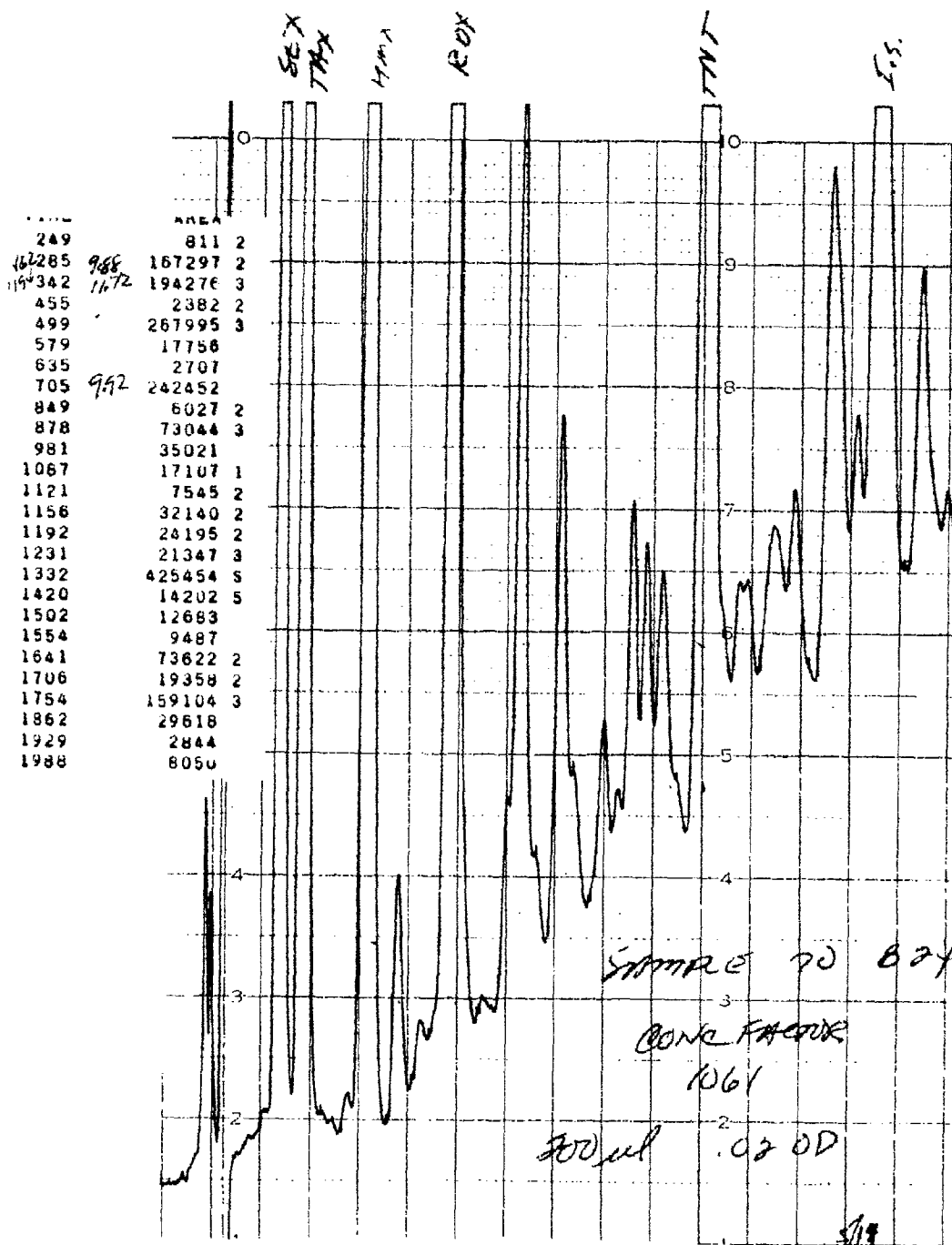
TIME	AREA
273	8393
325	16658
400	802
455	5276
505	14209
563	11052
650	96023
745	11239 2
761	51105 3
873	53412
981	6329 2
1019	5017 2
1053	20870 2
1095	38548 3
1294	44210 3
1361	5846 2
1508	21447 3
1553	2197
1629	9475 2
1691	137644 3
1797	20827
1865	2495
1933	345 2
2074	582 2
2114	5600 3
	589597T

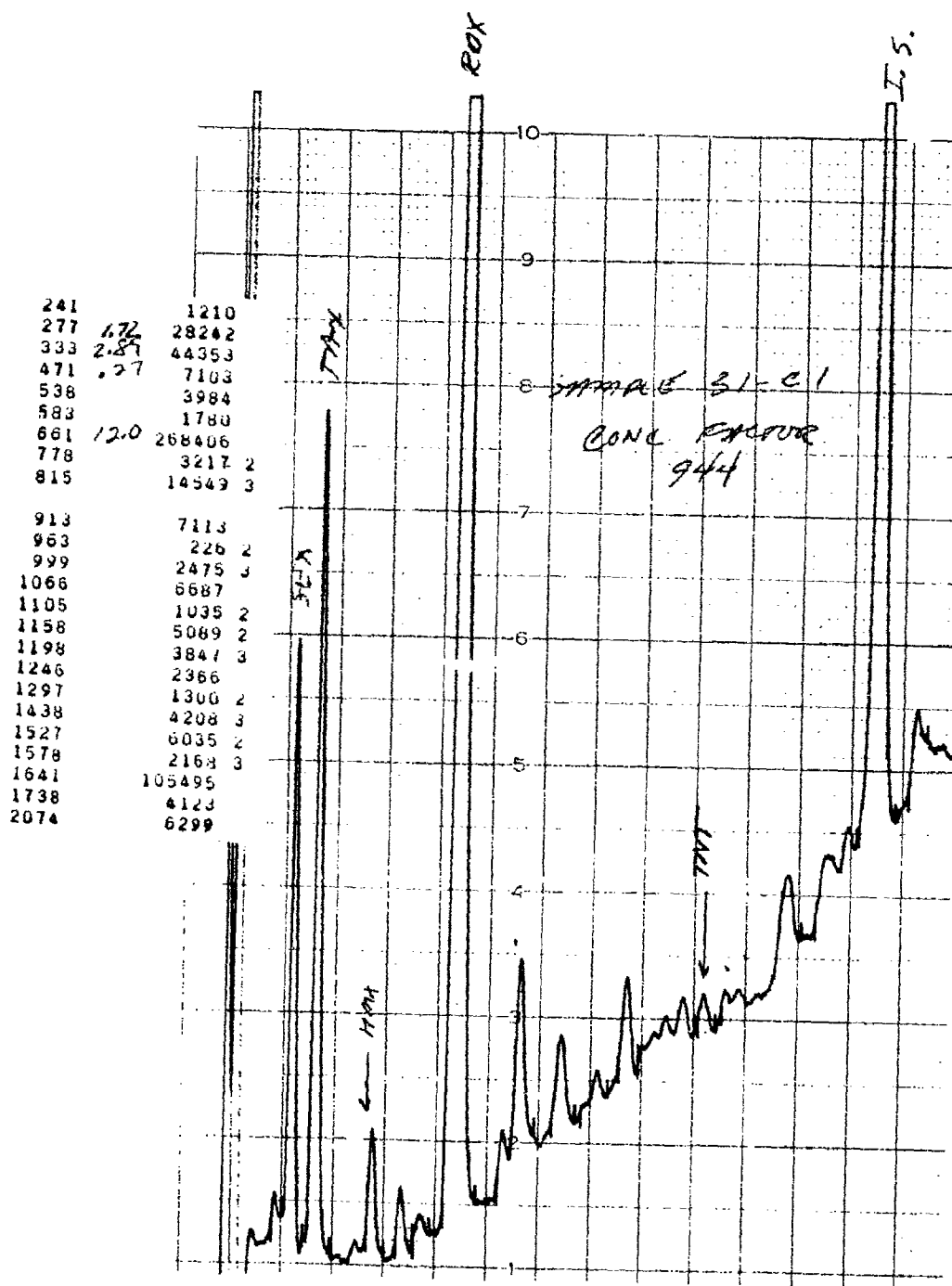




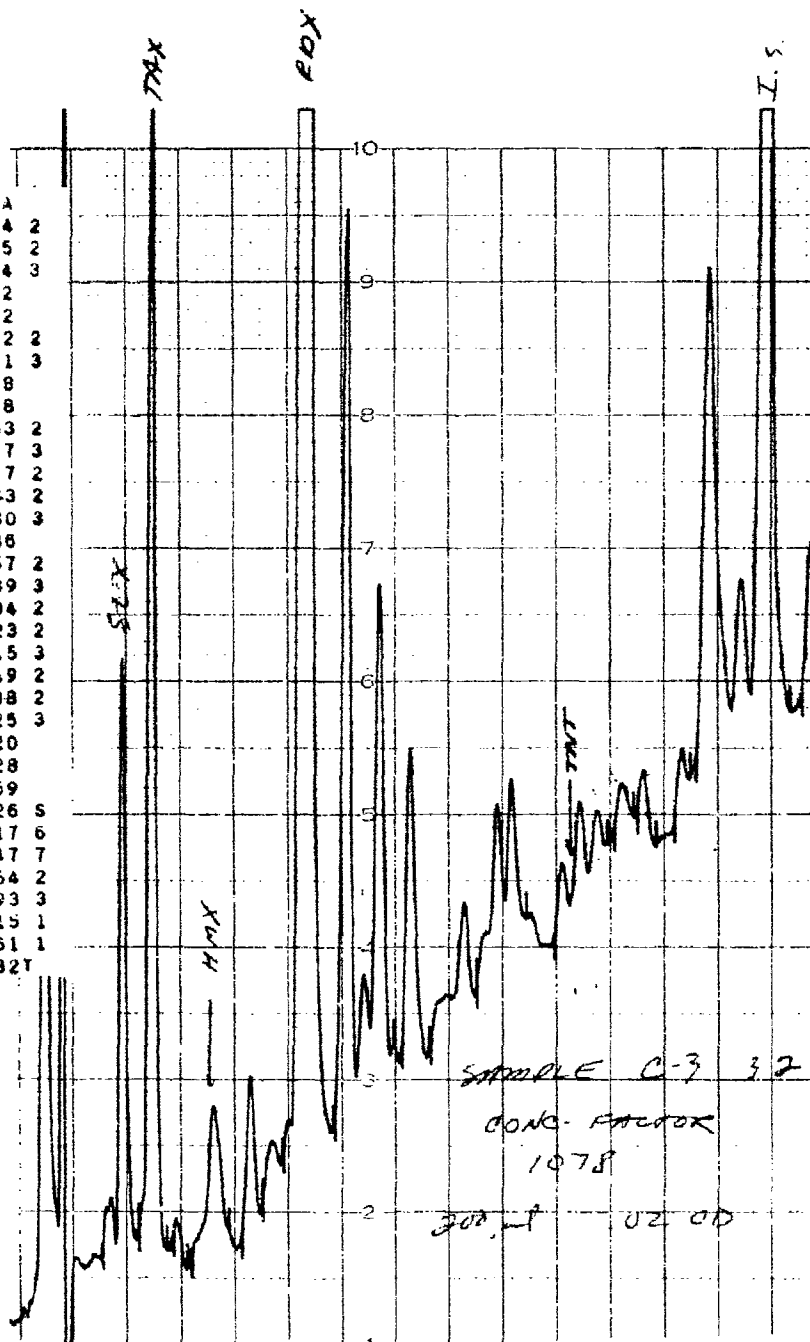
TIME	AREA
213	1837
269 0.53	9150
323 1.06	17849 2
360	14668 3
465	13236
521	20011
589	10660
651 4.30	106430
775	14824 2
807	83611 3
875	3707 2
905	58602 3
956	3560
1009	6596 2
1050	10249 2
1079	12740 2
1120	9247 3
1191	4028 2
1235	6048 3
1313	6570
1337	2058
1394	38917
1486	14236
1567	136848 5
1647	14211 6
1700	138053 7
1809	56602
1939	1187 1
2053	13201 1
2122	19801 1
2160	36333 1
	8850687







TIME	AREA	
235	1424	2
245	1925	2
271	30454	3
333	64902	
392	1362	
433	462	2
475	13151	3
559	9398	
604	3408	
642	1933	2
677	370517	3
773	61317	2
815	7083	2
849	31430	3
918	21986	
977	1657	2
1038	10939	3
1084	2304	2
1113	11823	2
1145	10315	3
1257	3749	2
1297	6138	2
1336	3325	3
1389	3120	
1440	3528	
1525	3069	
1585	76126	5
1657	8917	6
1709	109747	7
1815	11254	2
1852	13293	3
1988	2315	1
2126	92361	1
	9947321	

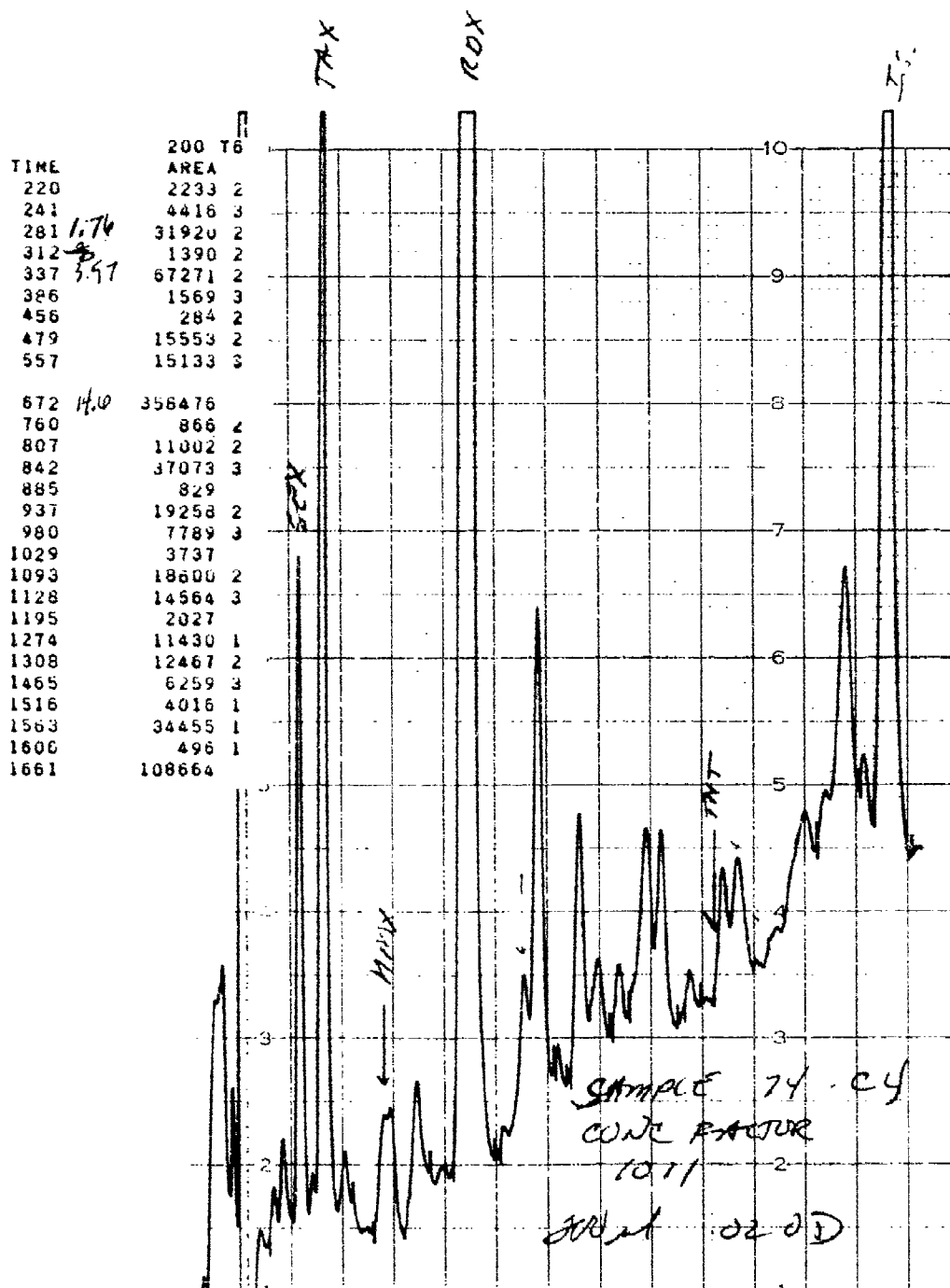


SAMPLE C-3 3.2

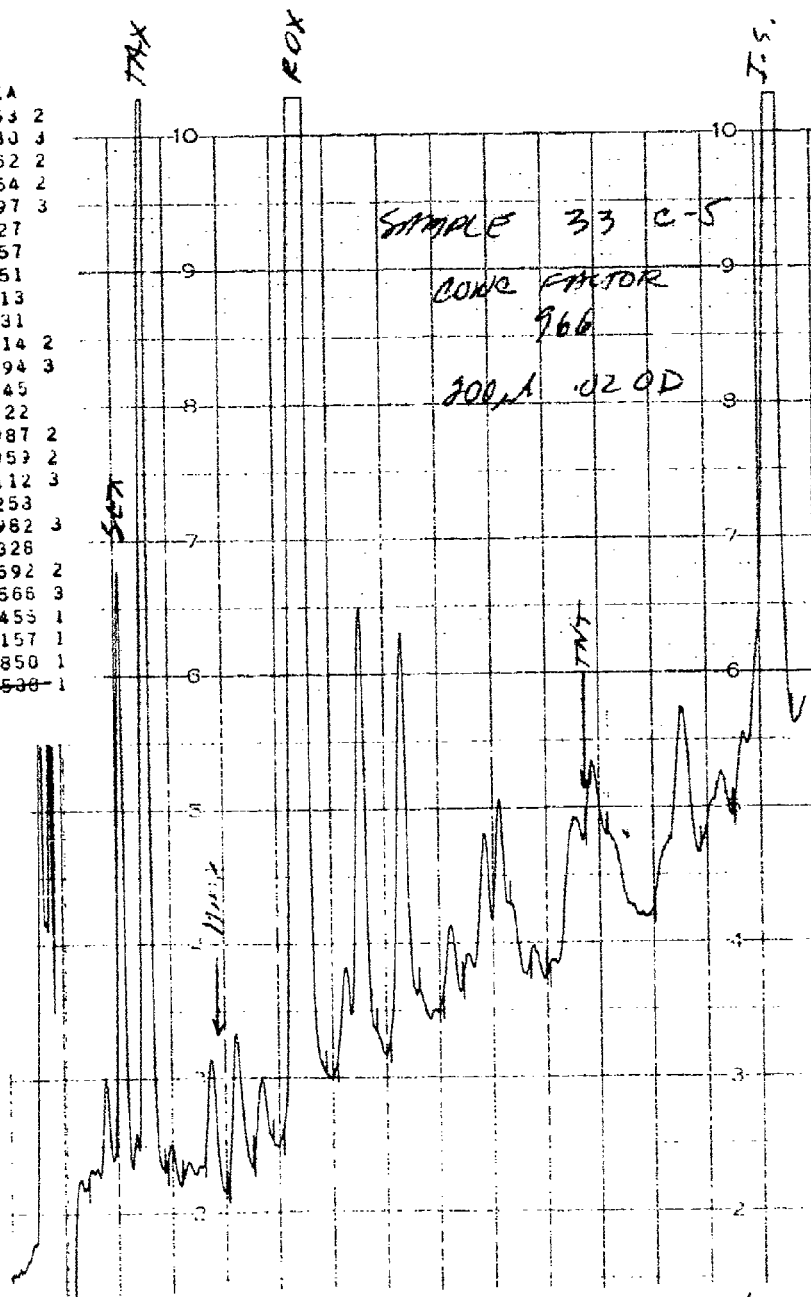
CONC. FACTOR
1078

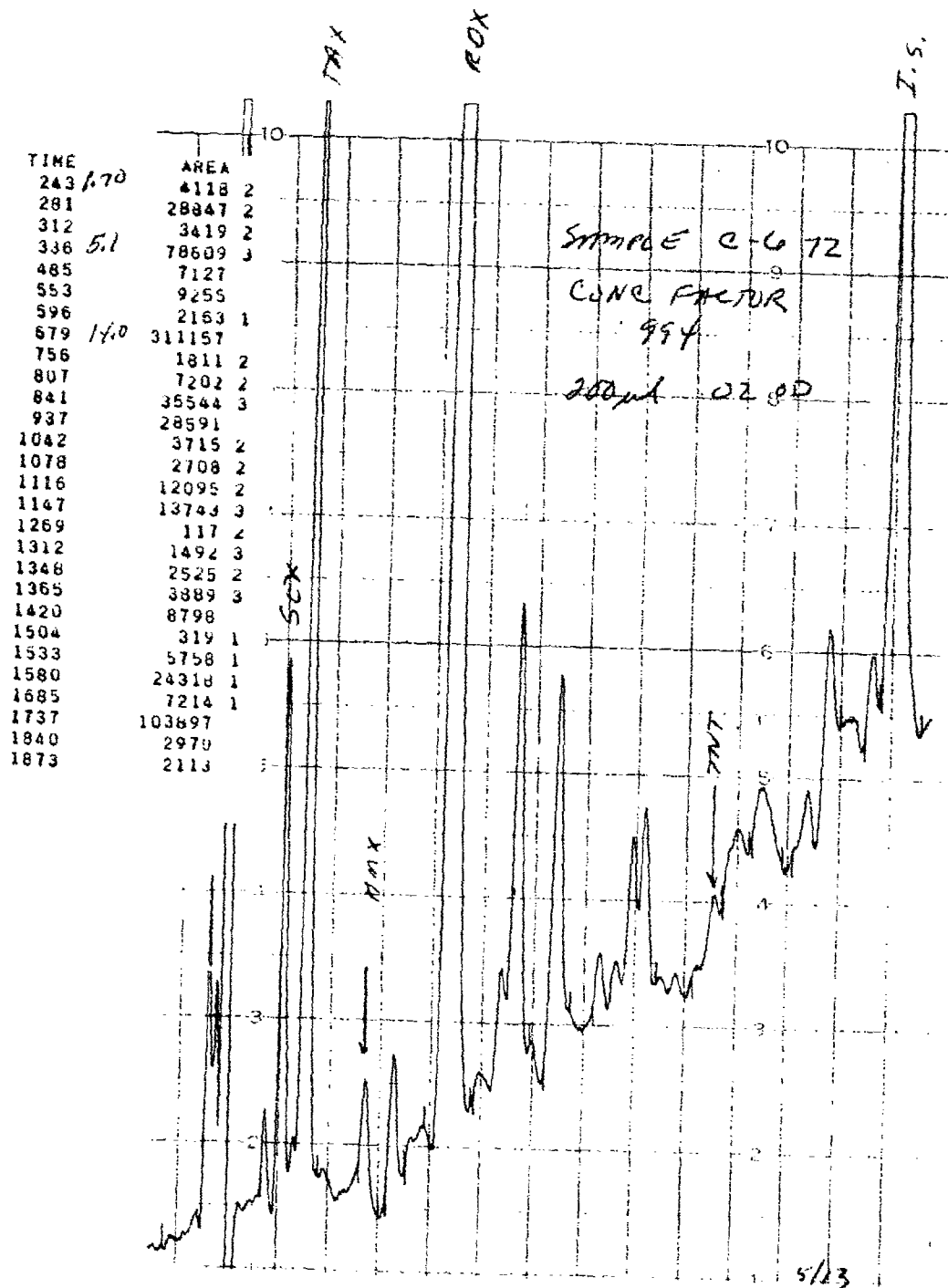
200.1 02 00

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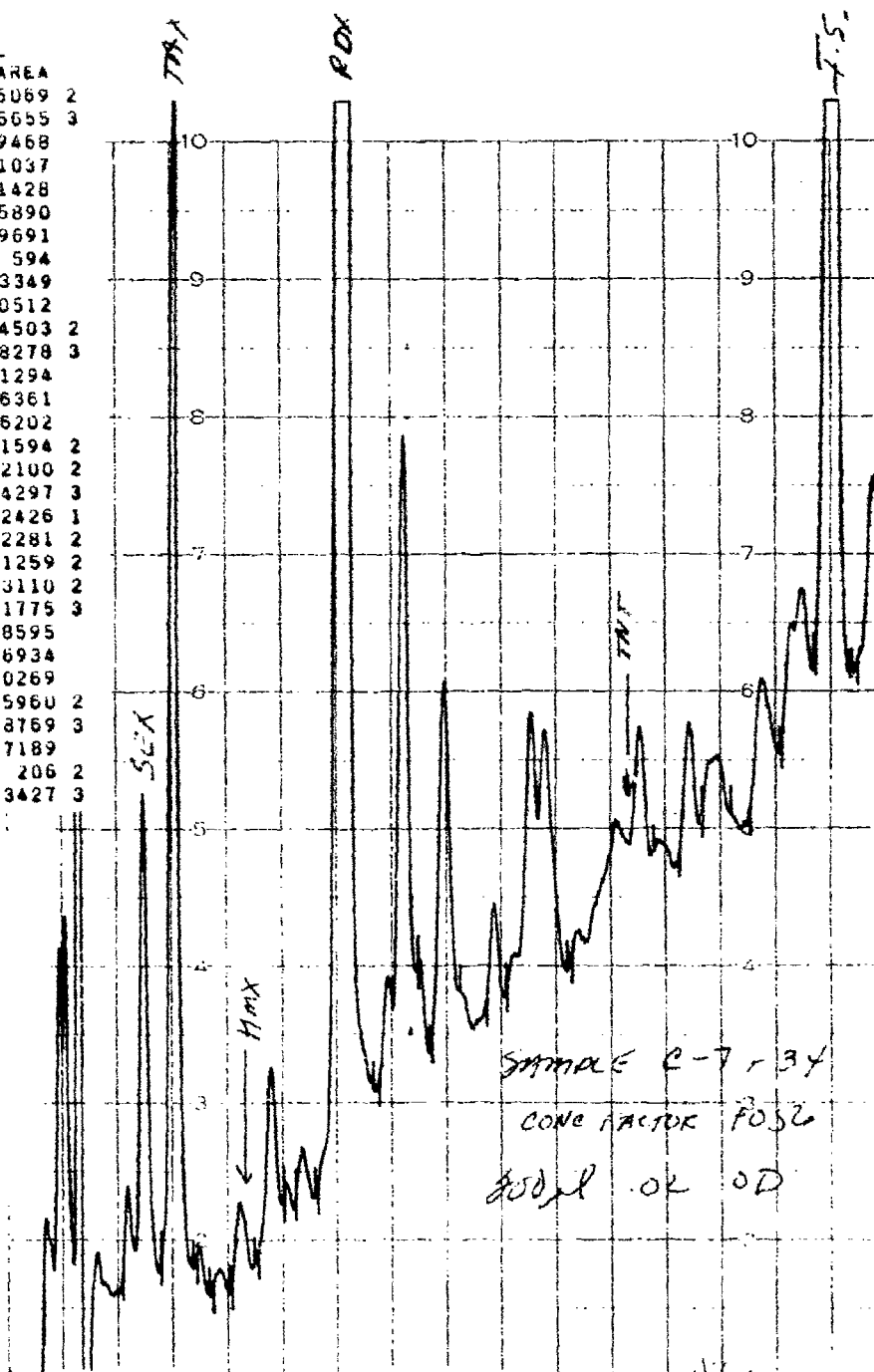


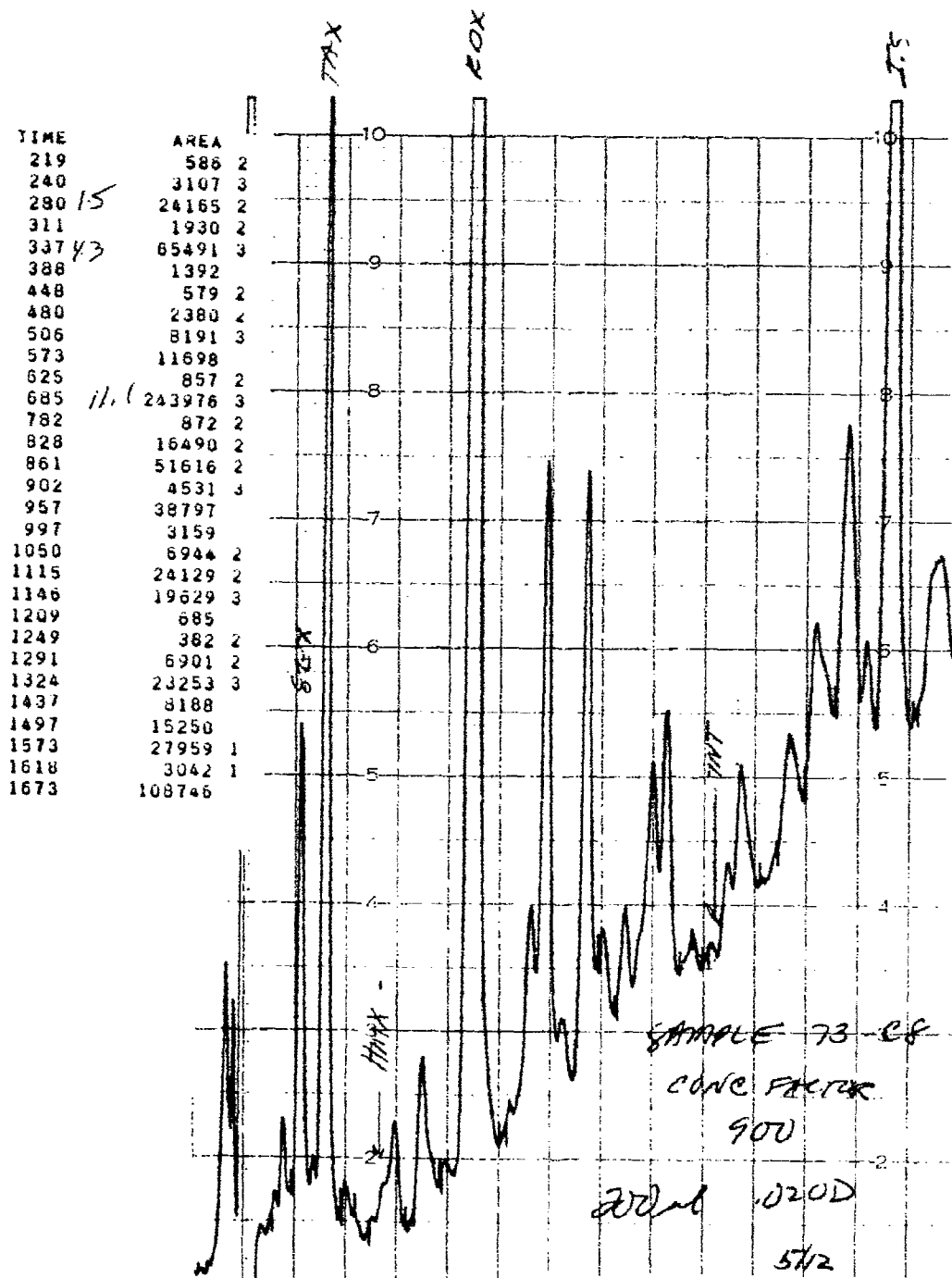
TIME	AREA
214	563 2
250	3480 J
286 1.74	28162 2
318	764 2
341 4.71	68197 3
396	1427
488	7657
545	10751
603	5013
689 16.7	346331
794	6114 2
832	31294 3
925	29545
1033	4722
1072	987 2
1109	6957 2
1144	7112 3
1216	1253
1309	3982 3
1353	5328
1513	2692 2
1556	19566 3
1621	1455 1
1643	5157 1
1693	4850 1
1759/10,000	124538-1



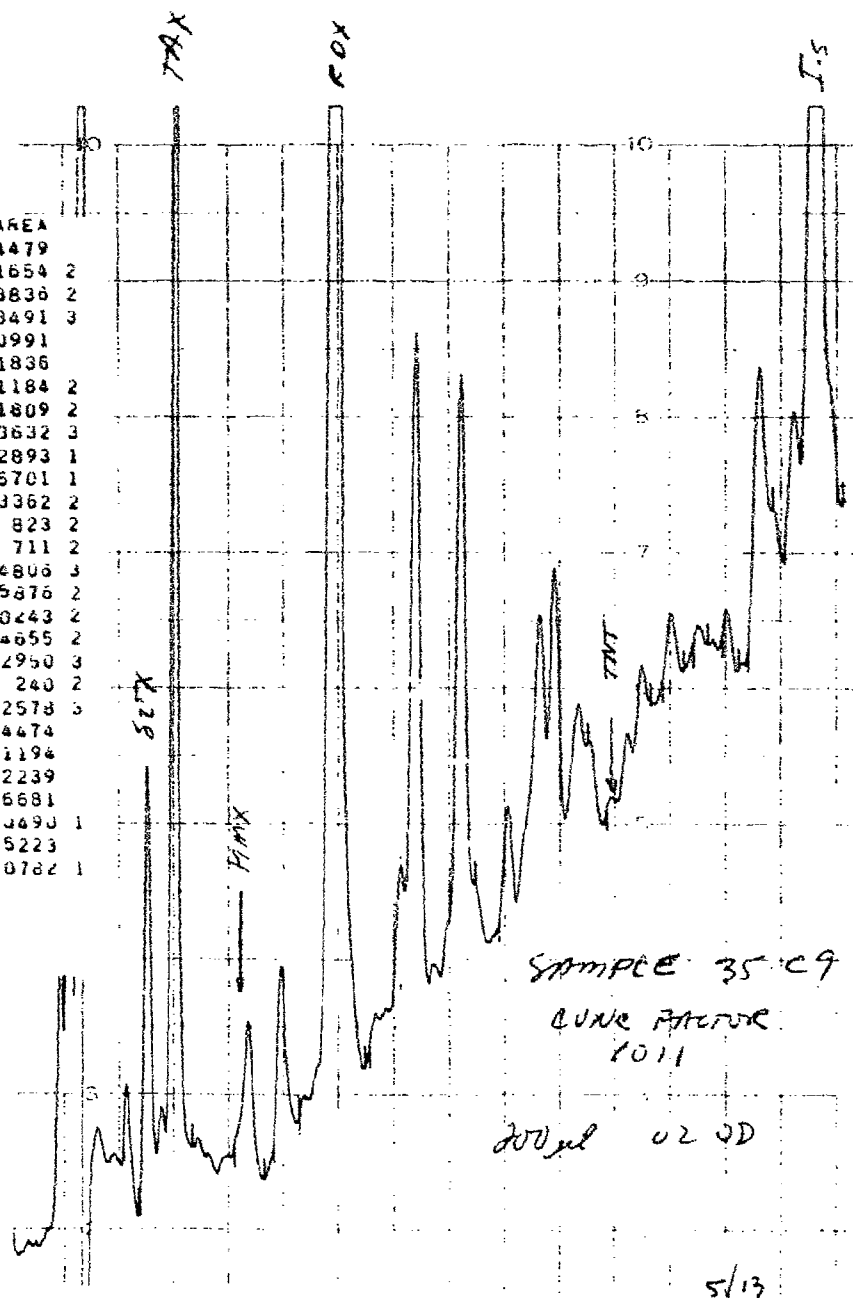


TIME	AREA
260	5069 2
294	26655 3
360	69468
414	1037
454	1428
506	5890
577	9691
608	594
647	3349
730	290512
834	4503 2
869	38278 3
902	1294
959	26361
1067	6202
1109	1594 2
1148	22100 2
1177	24297 3
1246	2426 1
1289	2281 2
1297	1259 2
1334	13110 2
1367	11775 3
1495	8595
1540	6934
1656	10269
1720	5960 2
1742	8769 3
1804	117189
1867	206 2
1899	13427 3

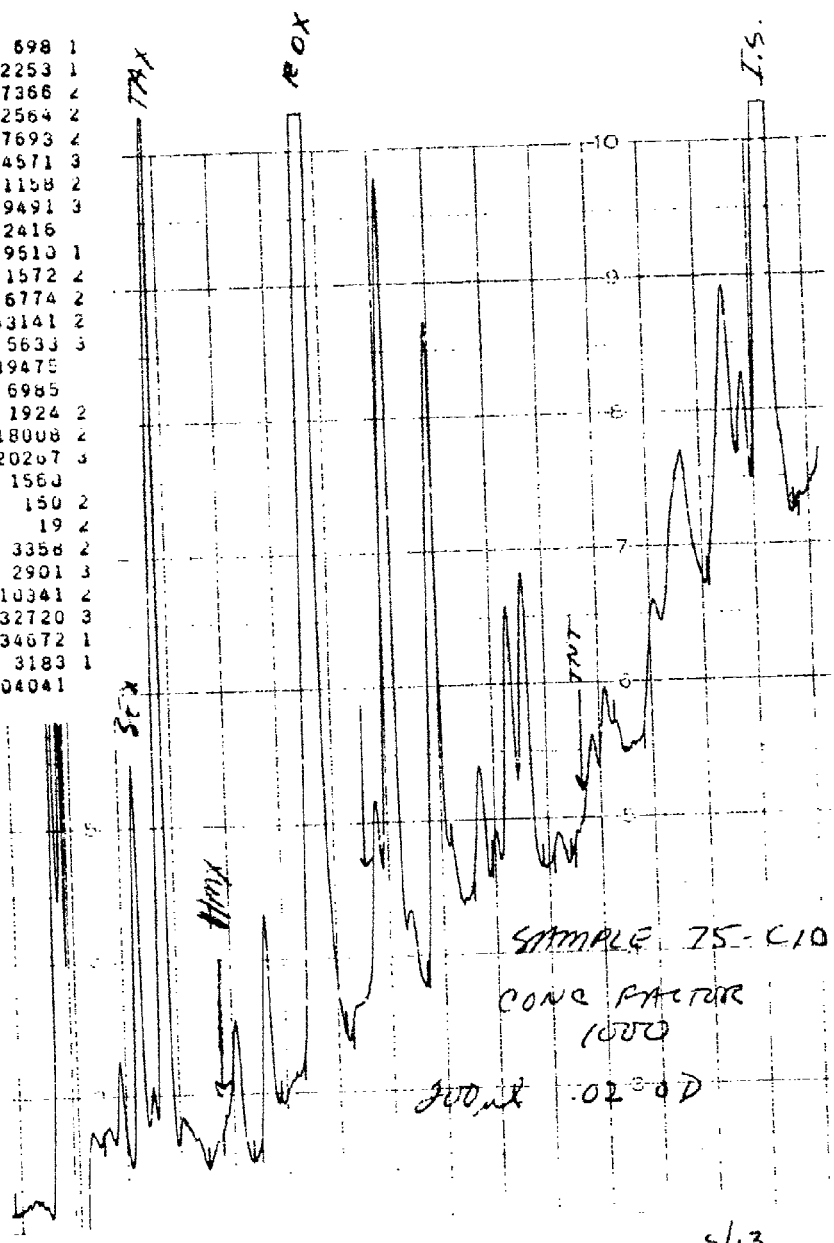




TIME	AREA	
248	4479	
293 123	21654	2
325	3836	2
351 5.99	63491	3
518	10991	
591	11836	
639	1184	2
671	1809	2
703 10.2	233632	3
798	2893	1
851	15701	1
882	53362	2
921	823	2
955	711	2
981	34806	3
1063	5876	2
1154	20243	2
1185	14655	2
1234	4950	3
1340	240	2
1376	2578	3
1441	4674	
1499	1194	
1562	2239	
1633	16681	
1709	13490	1
1752	105223	
1845	10782	1



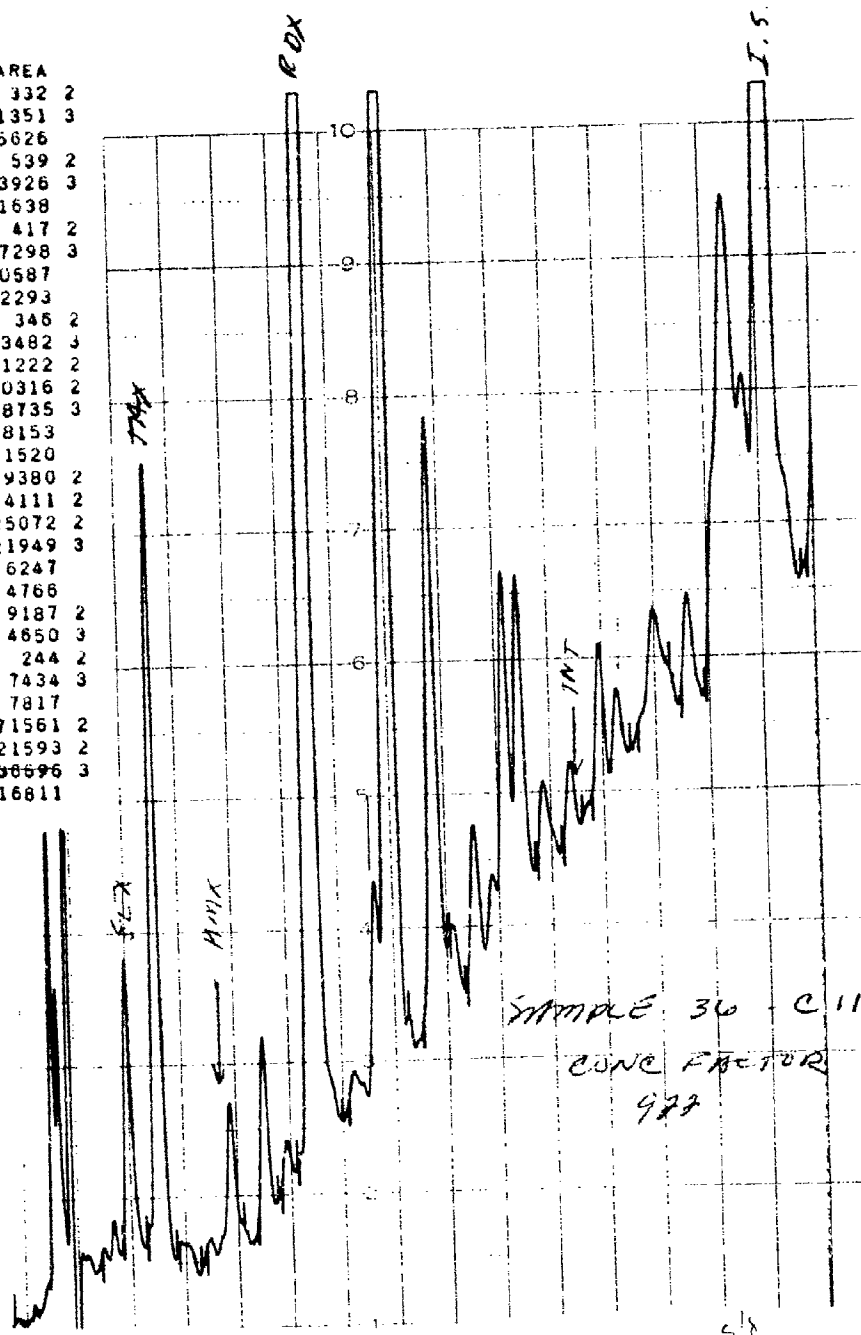
206	698	1
245	2253	1
288	1.01 17366	2
319	2564	2
345	3.7b 57693	2
365	4571	3
485	1158	2
509	9491	3
561	12416	1
695	9.83 219510	1
782	1572	2
840	16774	2
873	63141	2
911	5633	3
973	39475	3
1072	6985	3
1105	1924	2
1141	18008	2
1175	20207	3
1245	1563	2
1289	150	2
1299	19	2
1326	3358	2
1358	2901	3
1473	10341	2
1541	32720	3
1642	34672	1
1683	3183	1
1731	104041	1



SAMPLE 75-C10
 CONC FACTOR
 1000
 200.00 0.0200

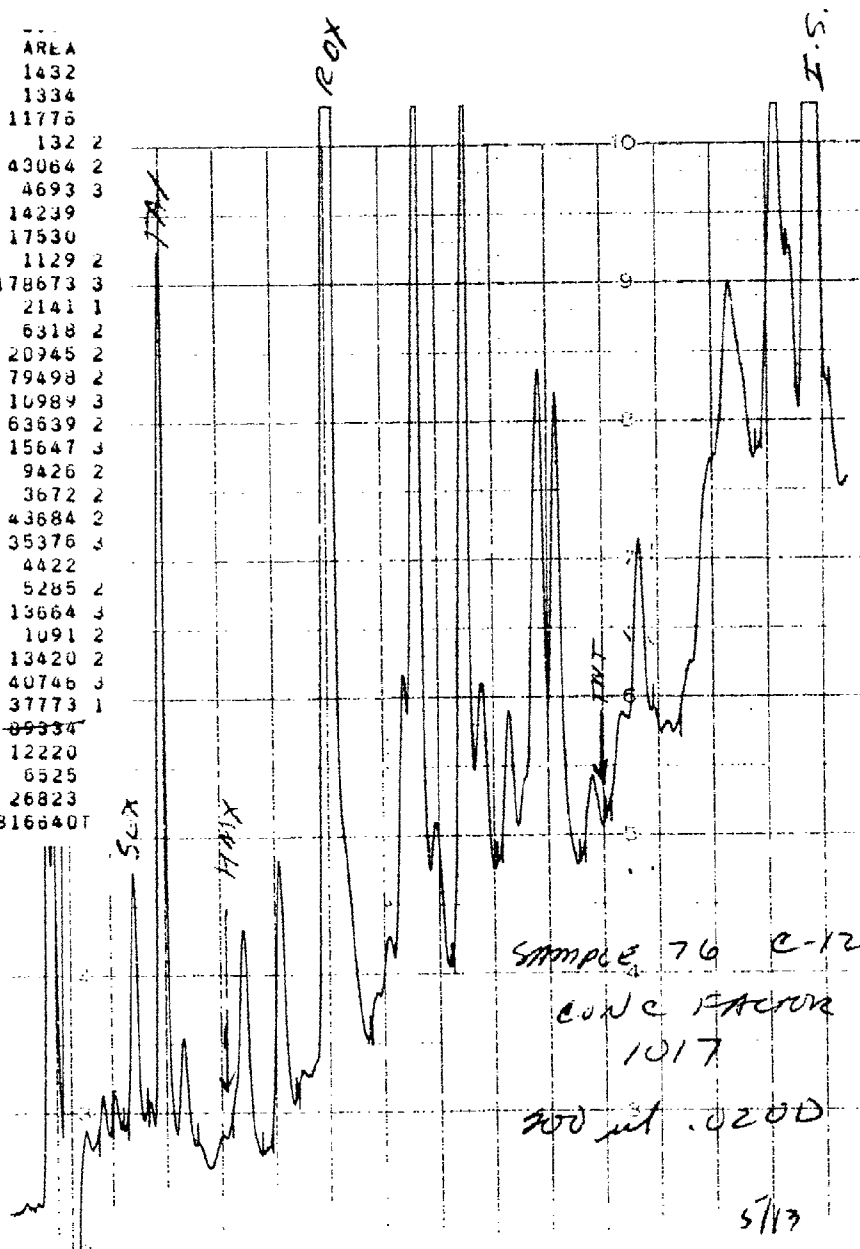
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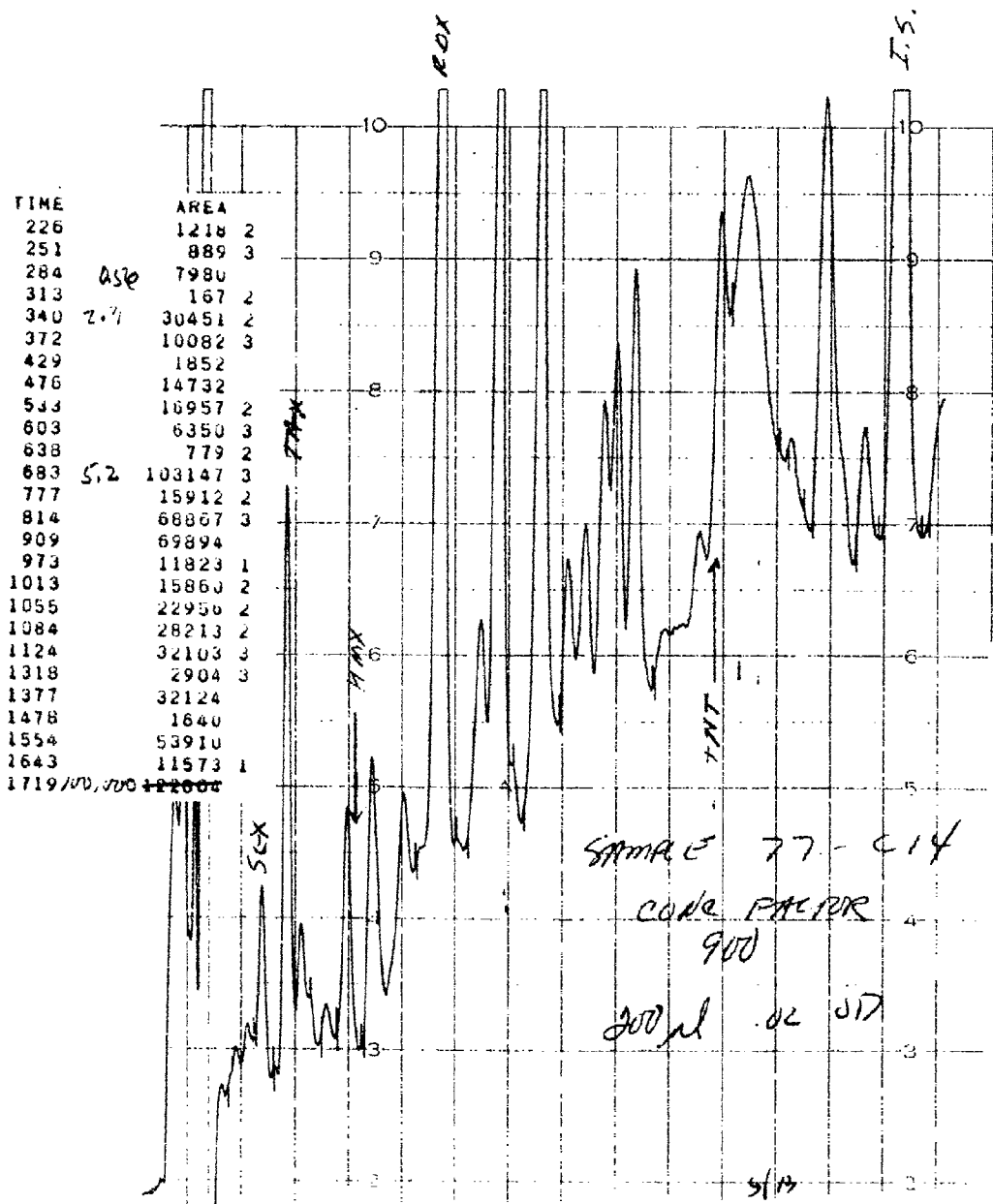
TIME	AREA
204	332 2
229	1351 3
266	15626 2
309	539 2
331	43926 3
375	1638 2
439	417 2
496	7298 3
569	10587 3
620	2293 2
648	346 2
682	163482 3
773	1222 2
831	10316 2
865	138735 3
965	38153 3
1004	1520 2
1057	9380 2
1096	4111 2
1129	25072 2
1162	21949 3
1216	6247 2
1277	4766 2
1345	9187 2
1383	4650 3
1437	244 2
1469	7434 3
1544	7817 2
1635	71561 2
1676	21593 2
1723	138696 3
1824	16811 2

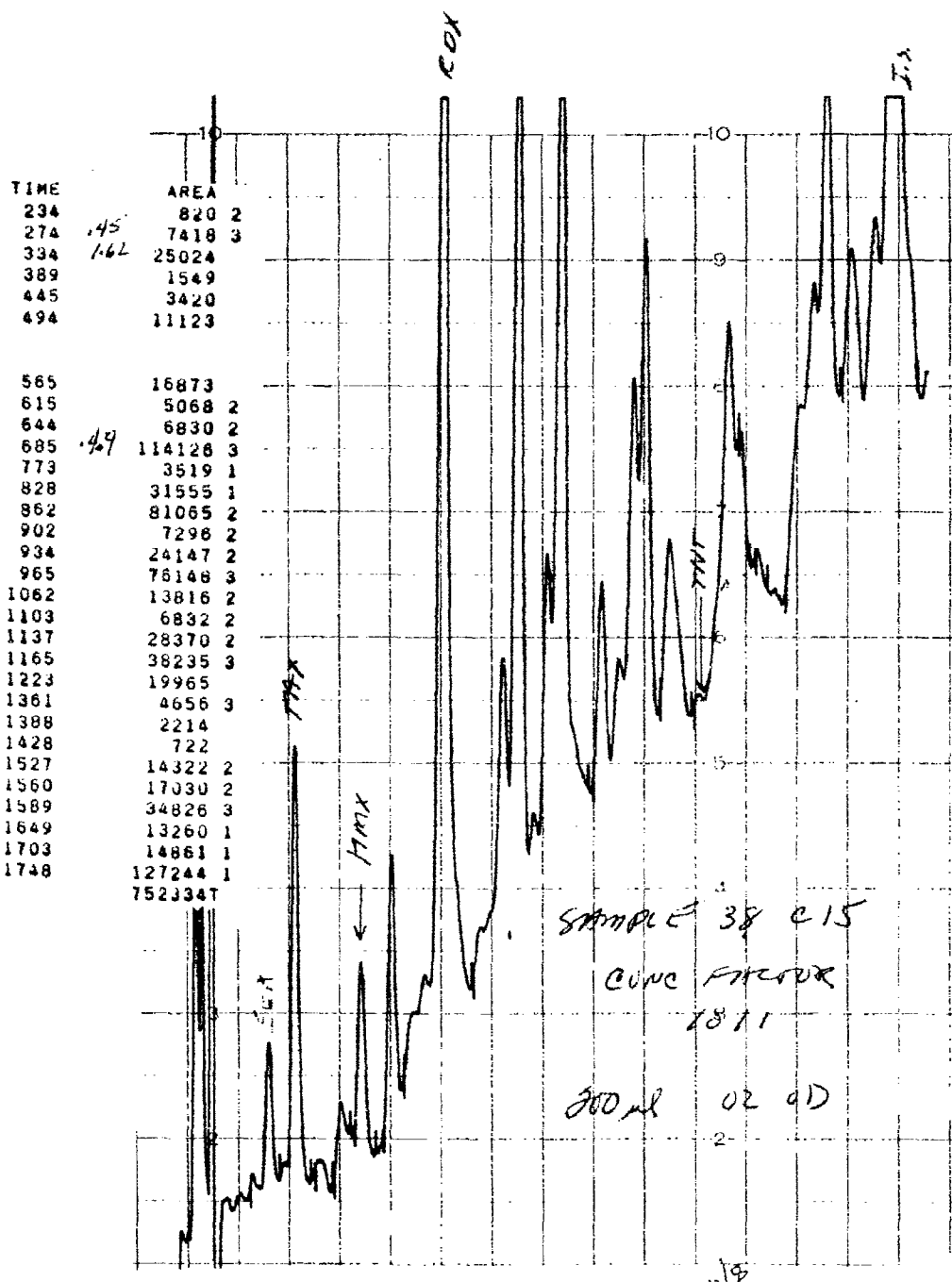


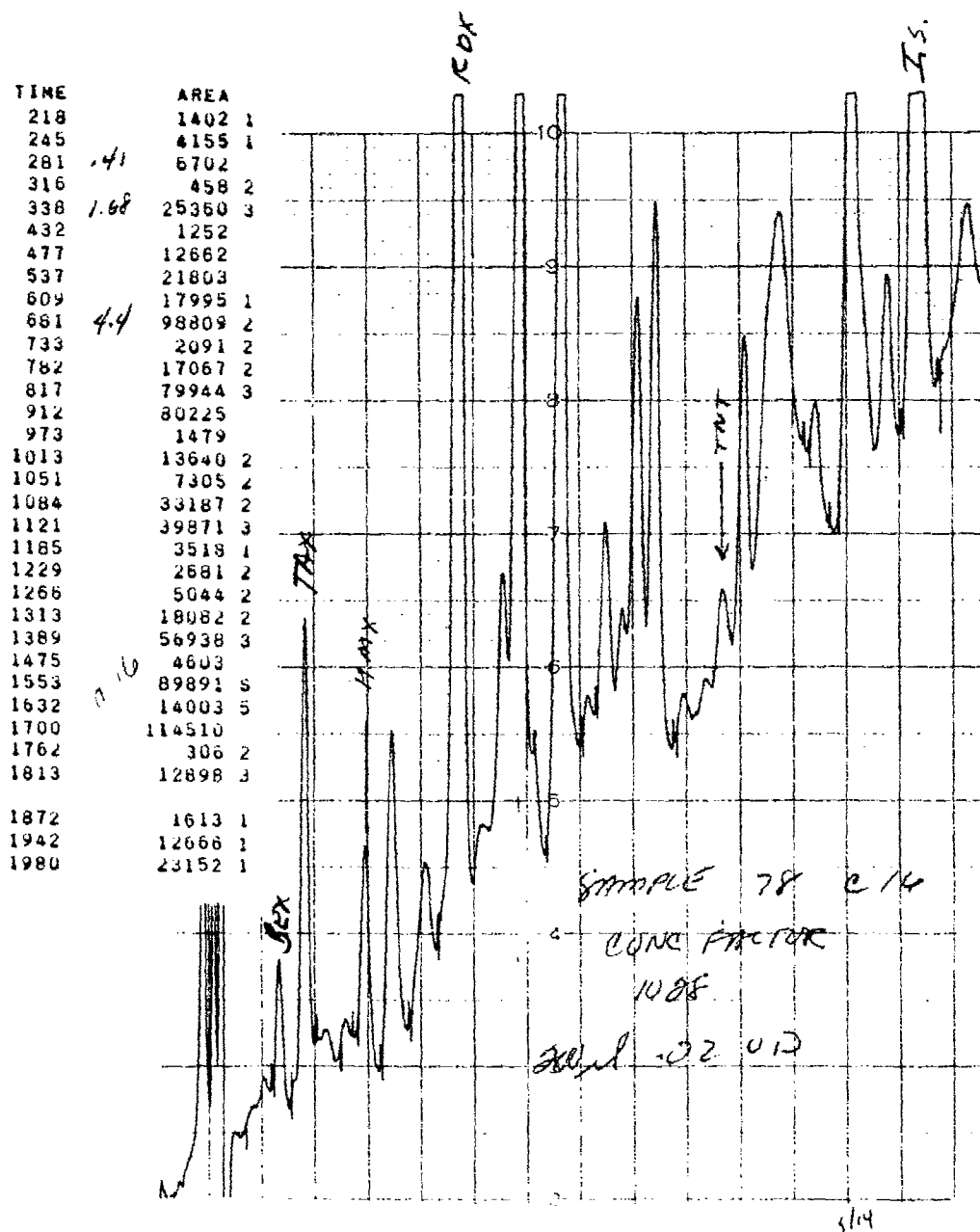
SAMPLE 36 - C 11
 CONC FACTOR
 923

TIME	AREA
219	1432
245	1334
289	11775
320	132 2
350	43064 2
397	4693 3
530	14239
609	17530
656	1129 2
718	178673 3
824	2141 1
850	6318 2
884	20945 2
912	79498 2
955	10989 3
1018	63639 2
1057	15647 3
1117	9426 2
1153	3672 2
1183	43684 2
1221	35376 3
1298	4422
1361	5285 2
1402	13664 3
1513	1091 2
1556	13420 2
1597	40746 3
1697	37773 1
1774	10200 2
1877	12220
1960	6525
2070	26823
	8166401

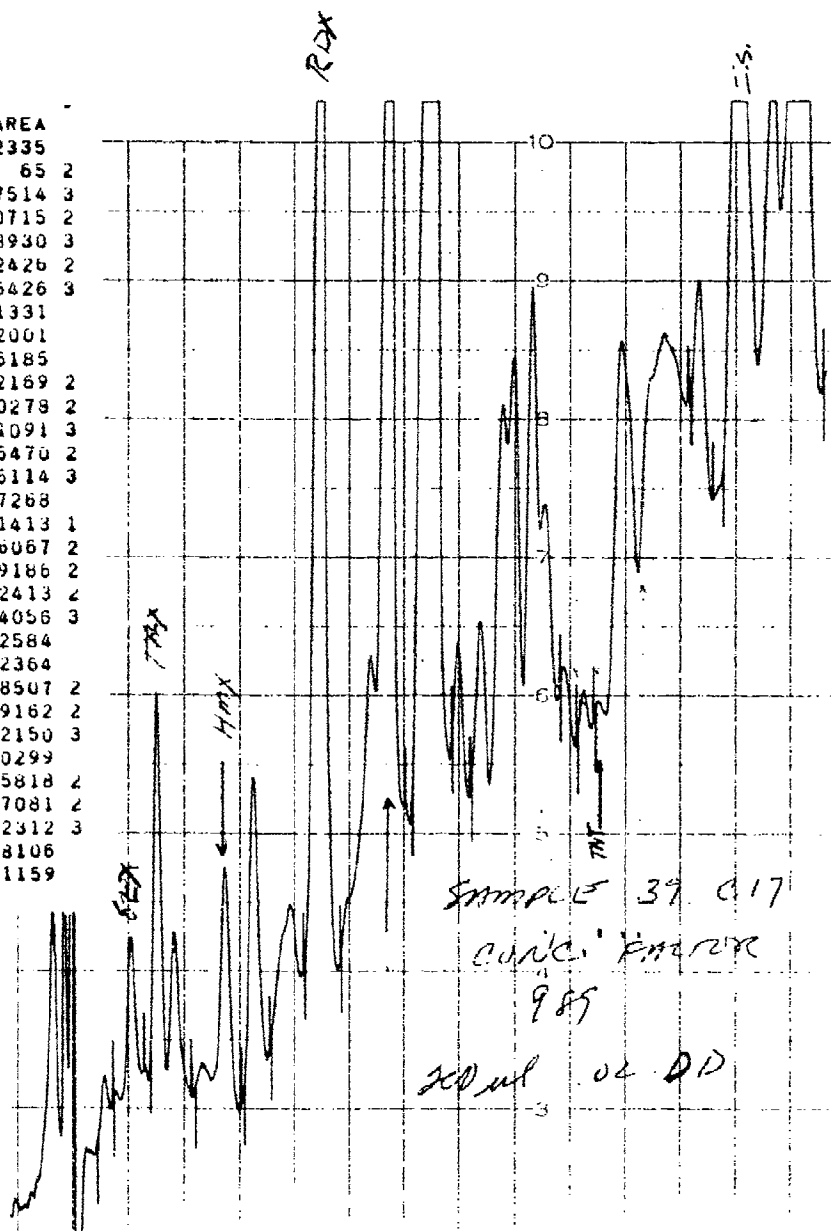




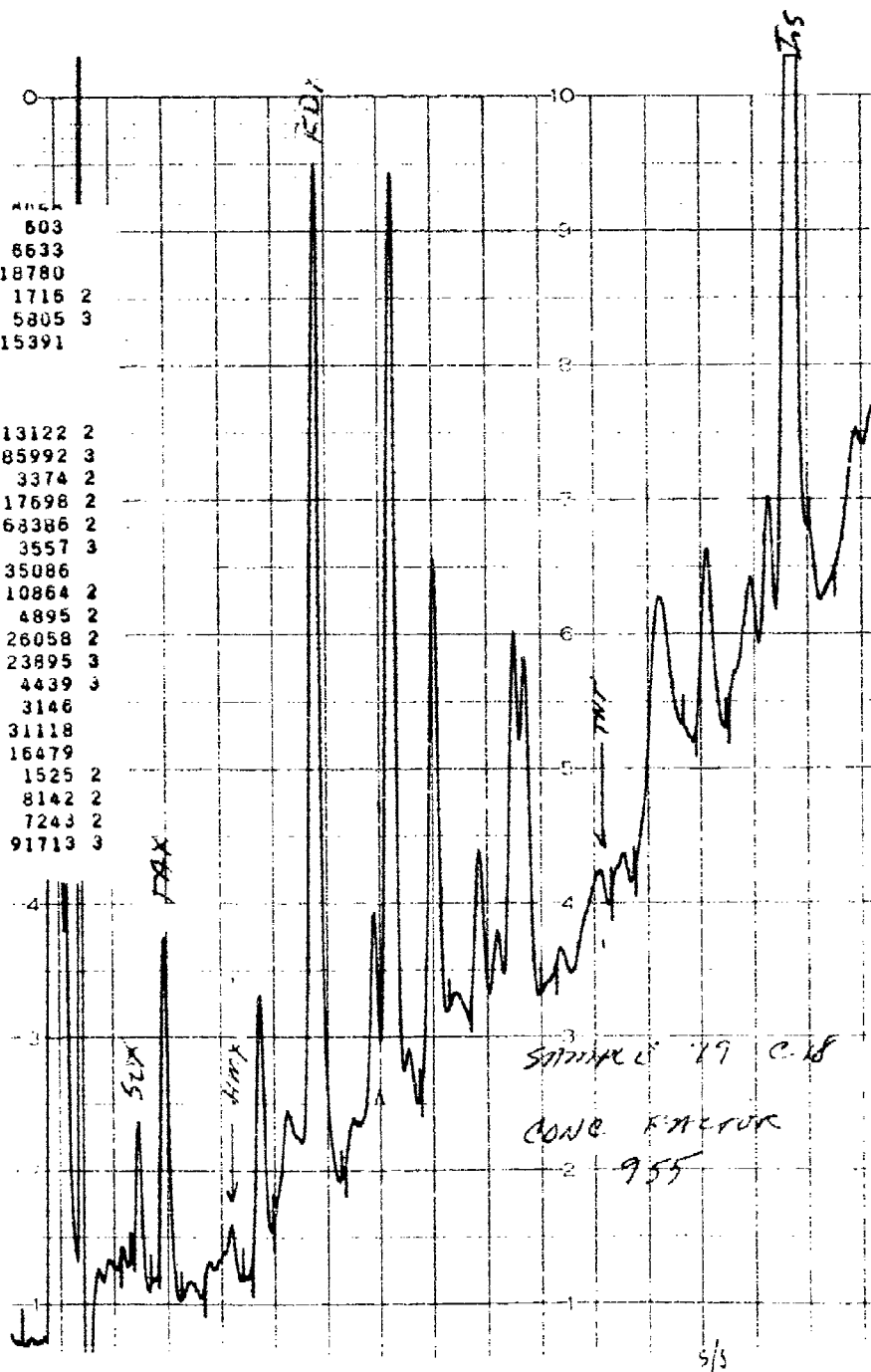




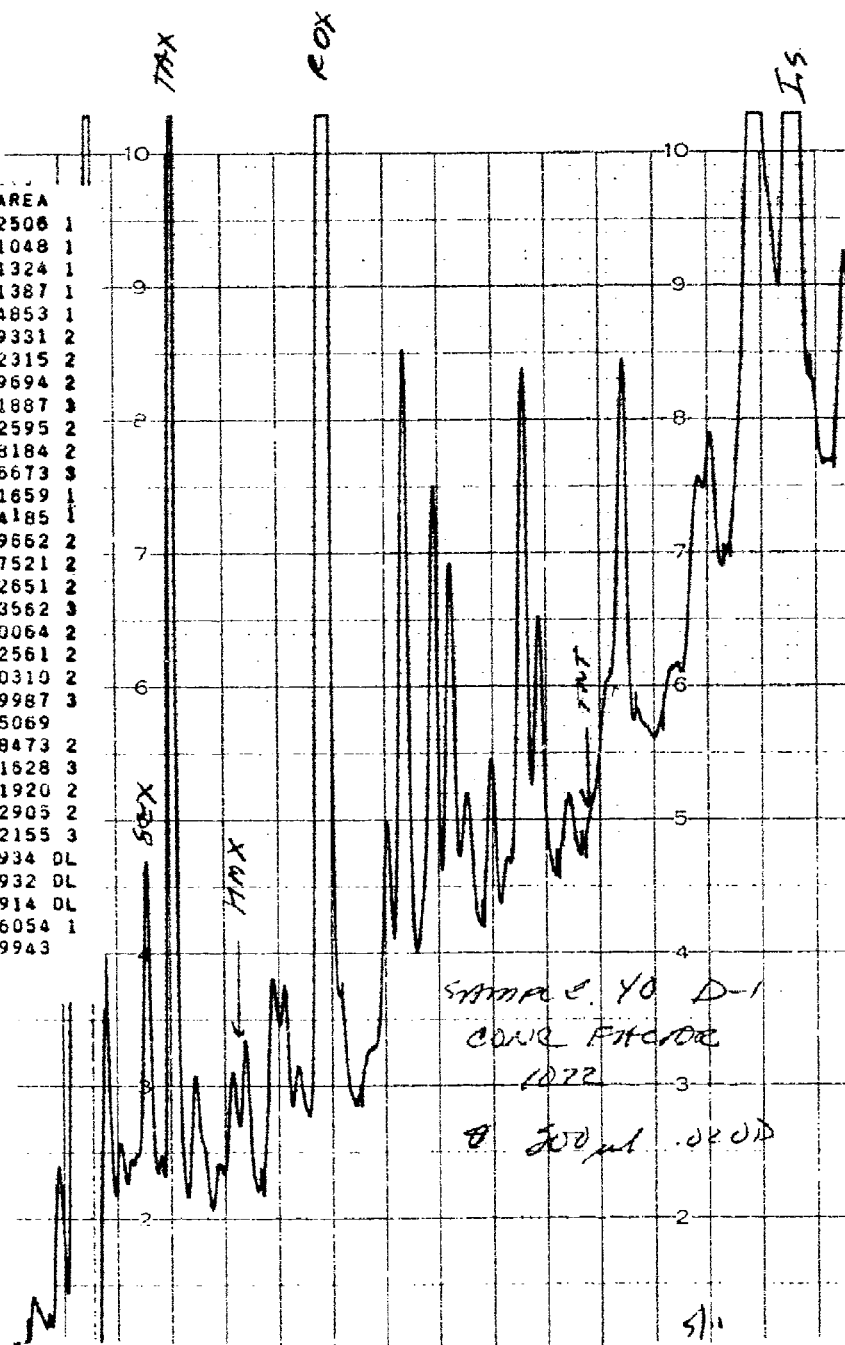
TIME	AREA
216	2335
238	65 2
274	7514 3
330	20715 2
368	8930 3
427	2426 2
477	16426 3
540	21331
618	12001
681	96185
745	2169 2
795	20278 2
831	91091 3
909	45470 2
929	75114 3
987	7268
1035	11413 1
1085	26067 2
1106	29186 2
1147	32413 2
1175	14056 3
1216	2584
1261	2364
1341	28507 2
1407	9162 2
1431	22150 3
1510	10299
1592	85818 2
1667	37081 2
1724	142312 3
1829	58106
1893	1159



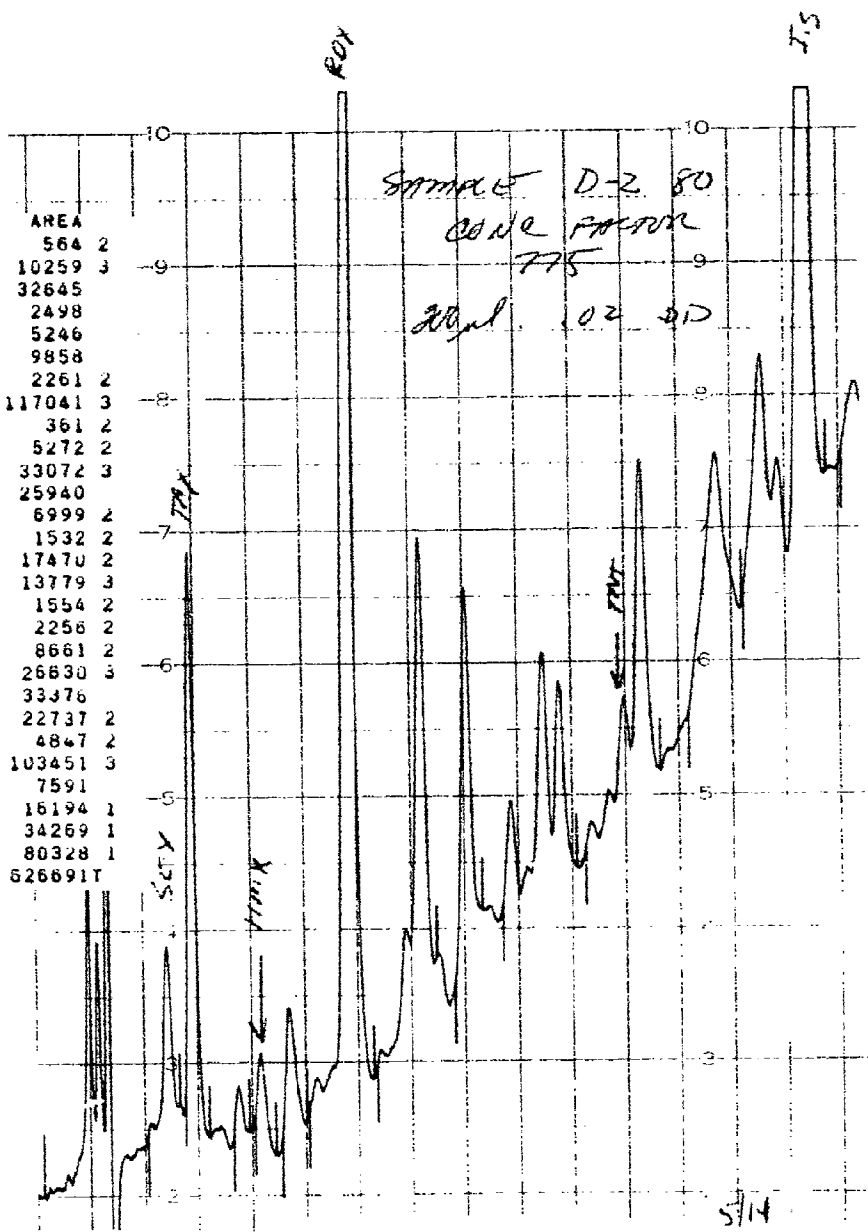
607	13122	2
668	41. 85992	3
754	3374	2
804	17698	2
840	68386	2
879	3557	3
938	35086	
1040	10864	2
1078	4895	2
1117	26058	2
1141	23895	3
1302	4439	3
1345	3146	
1440	31118	
1550	16479	
1612	1525	2
1649	8142	2
1689	7243	2
1737	91713	3

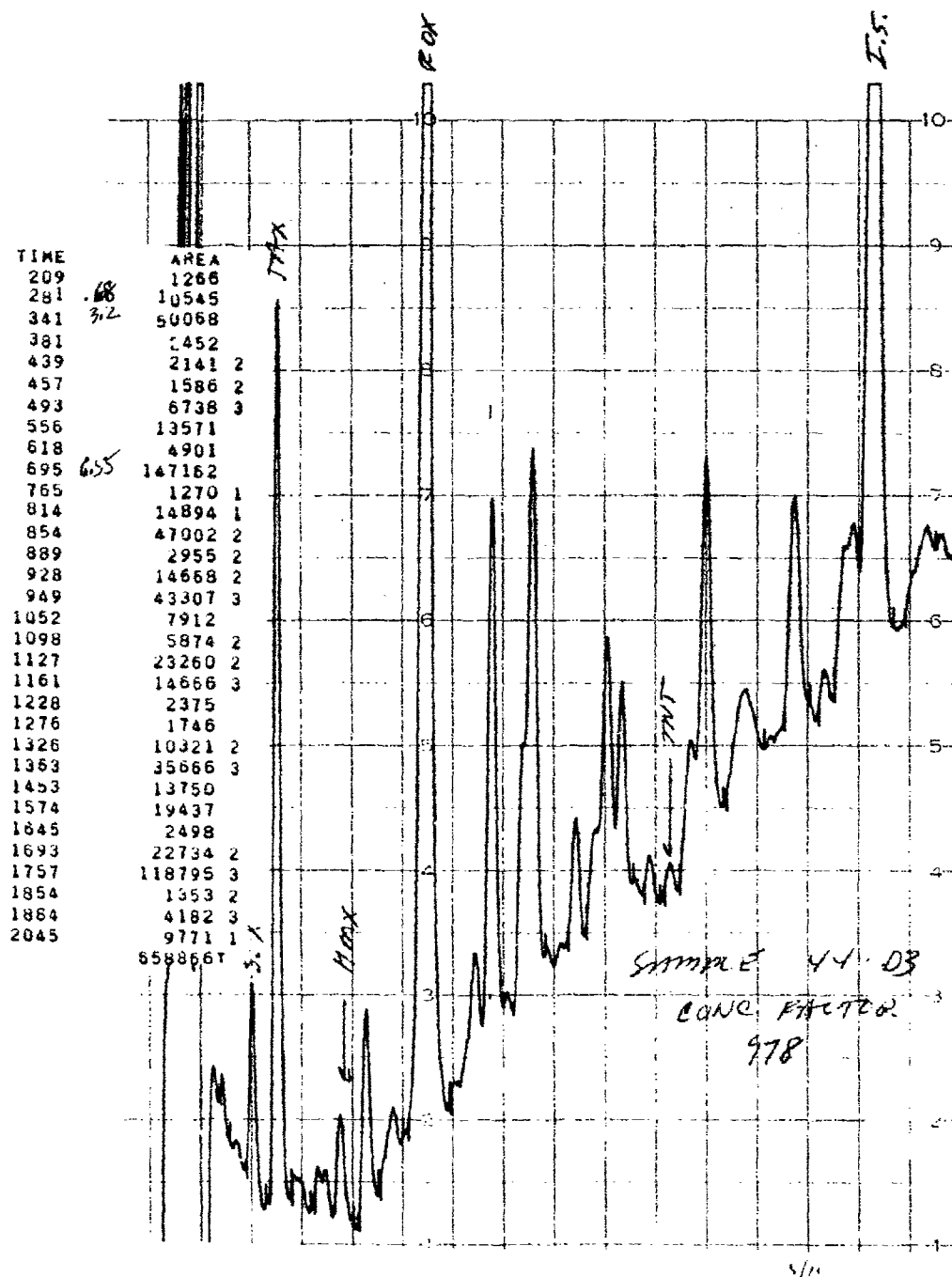


TIME	AREA
212	2506 1
237	1048 1
274 1.2	21324 1
305	1387 1
329 3.4	64853 1
381	9331 2
434	2315 2
464	9694 2
493	11887 3
555	12595 2
581	8184 2
667 7.16	186673 3
769	1659 1
813	24185 1
850	59662 2
916	47521 2
955	32651 2
991	13562 3
1047	10064 2
1082	2561 2
1116	40310 2
1153	19987 3
1220	5069
1309	8473 2
1341	31628 3
1450	1920 2
1512	12905 2
1537	12155 3
	934 DL
	932 DL
	914 DL
1638	106054 1
1718	89943

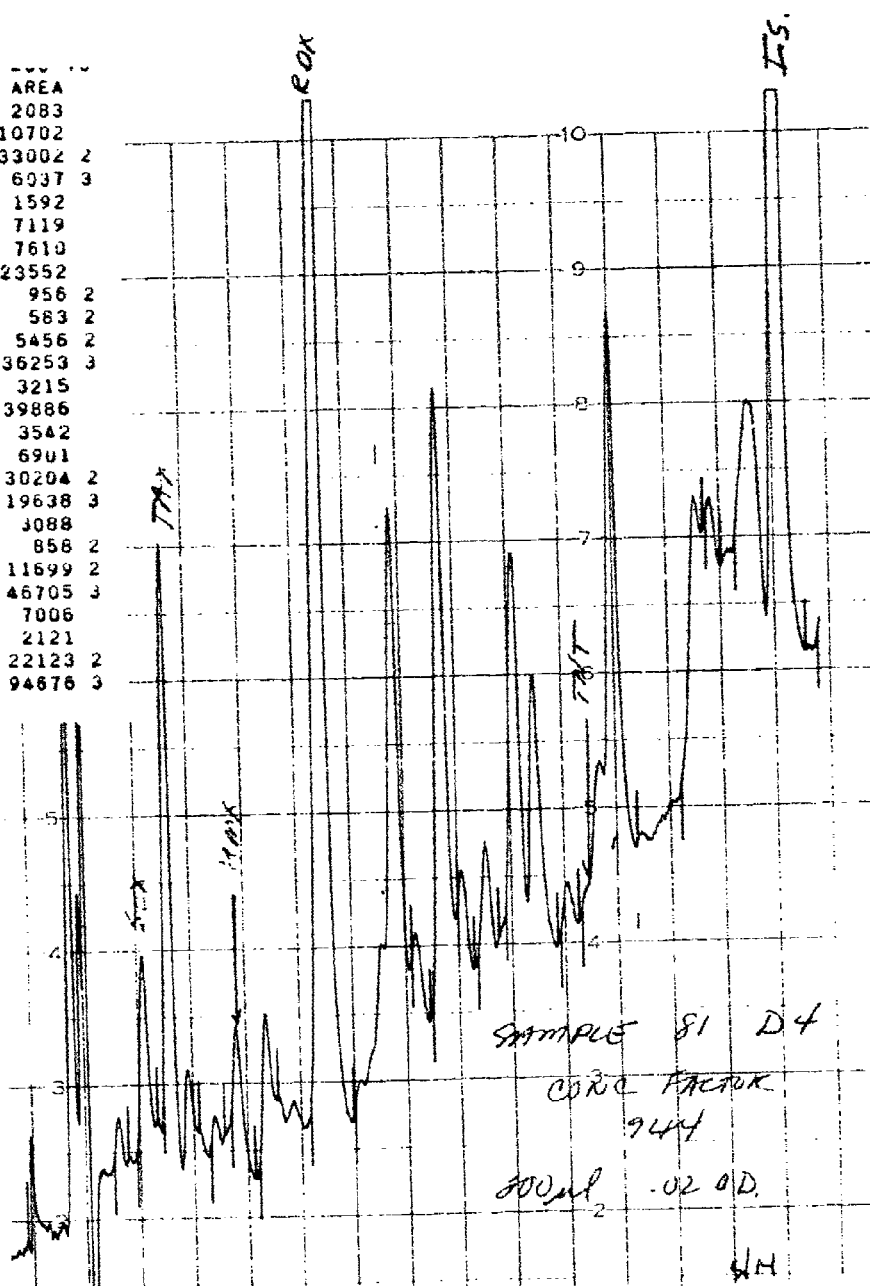


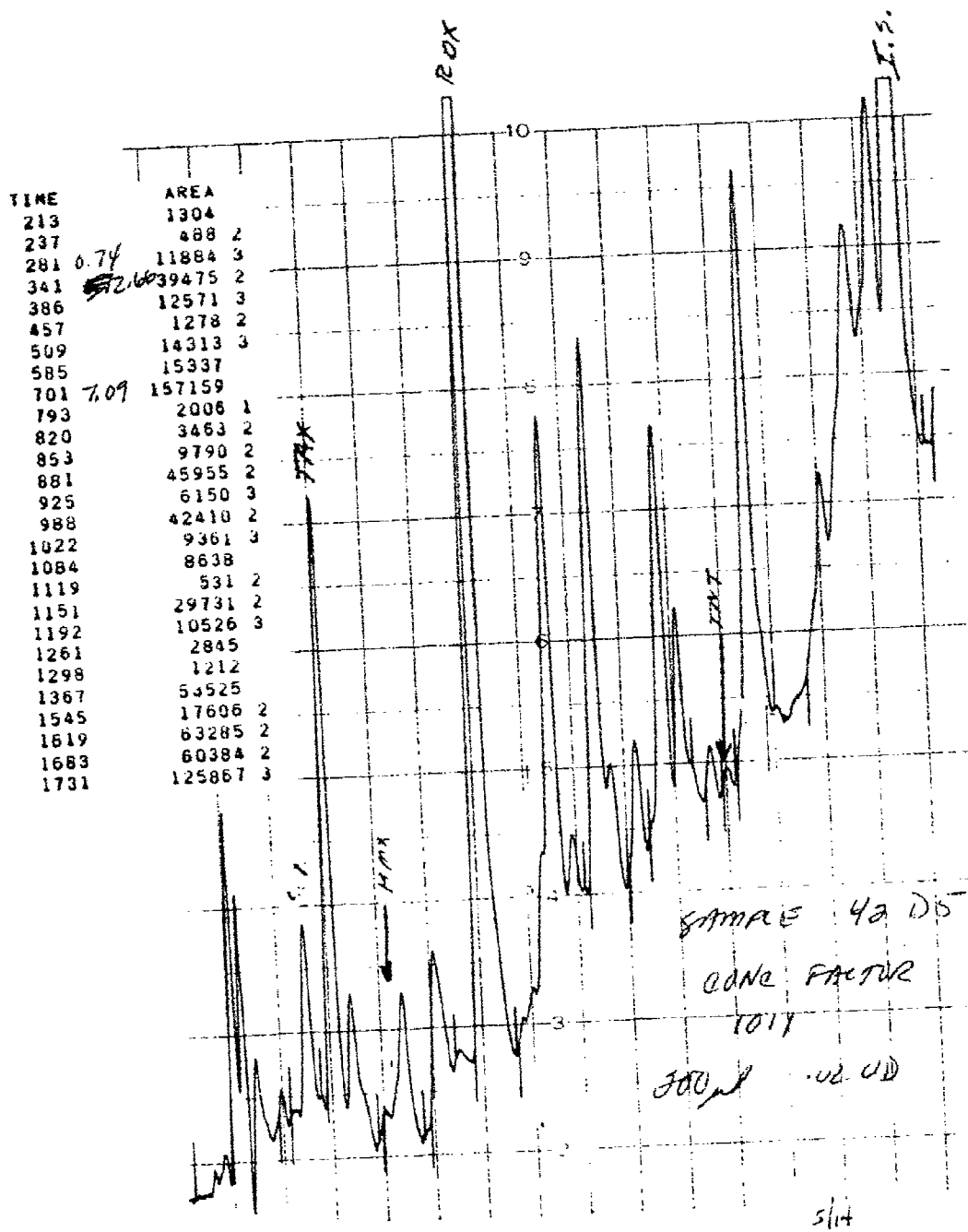
TIME	AREA
240	564 2
278	10259 3
335	32645
439	2498
489	5246
555	9858
613	2261 2
689	117041 3
760	361 2
816	5272 2
851	33072 3
953	25940
1053	6999 2
1087	1532 2
1122	17470 2
1160	13779 3
1228	1554 2
1269	2256 2
1304	8661 2
1343	26630 3
1513	33376
1615	22737 2
1652	4847 2
1709	103451 3
1823	7591
1929	16194 1
2094	34269 1
2147	80328 1
	5266917





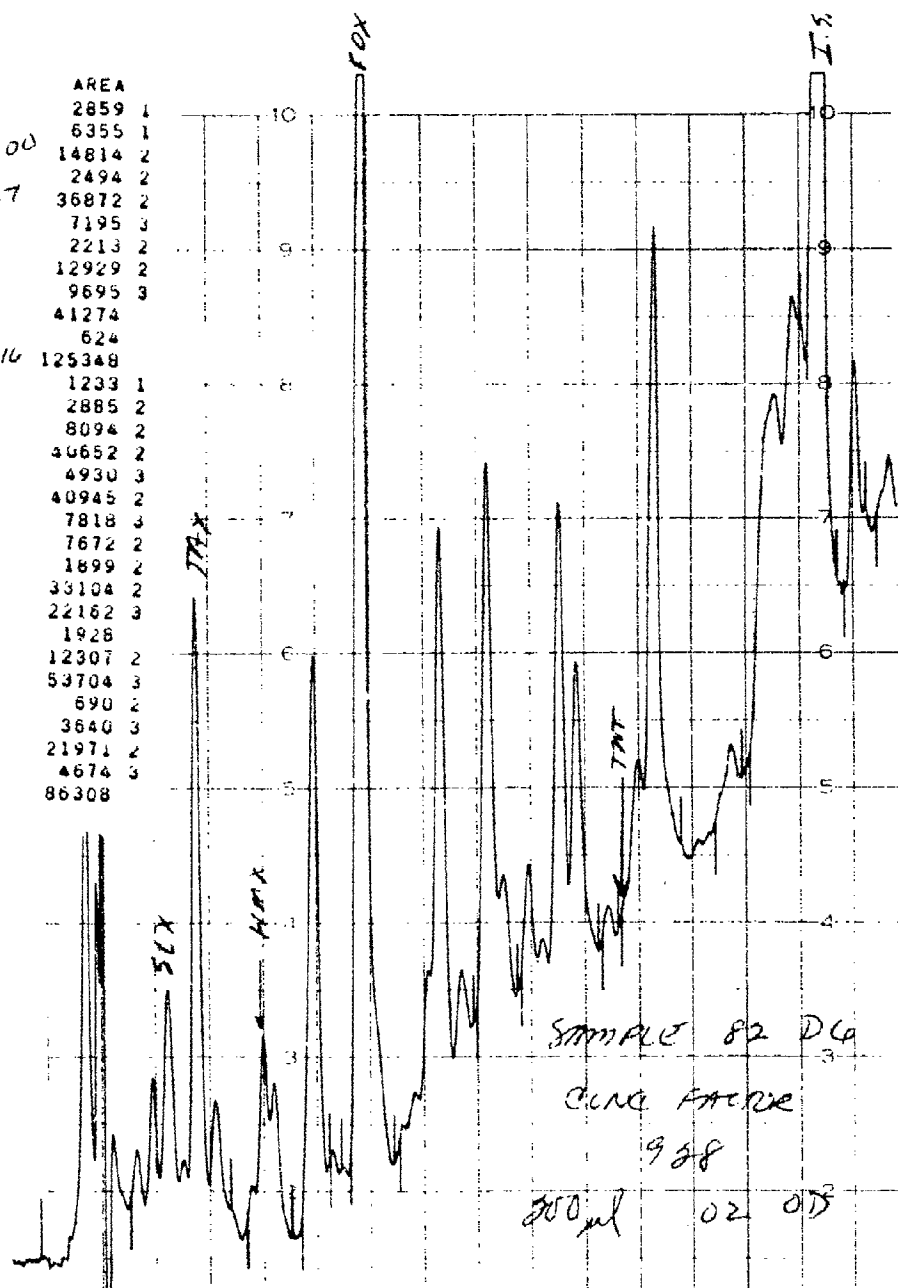
TIME	AREA
209	2083
270	10702
326	33002 2
369	6037 3
426	1592
478	7119
544	7610
673	123552
753	956 2
785	583 2
808	5456 2
840	36253 3
883	3215
945	39886
988	3542
1042	6901
1110	30204 2
1154	19638 3
1224	3088
1268	858 2
1300	11699 2
1337	46705 3
1525	7006
1559	2121
1645	22123 2
1712	94676 3





TIME	AREA
213	1304
237	488 2
281 0.74	11884 3
341 ~~52.60~~	39475 2
386	12571 3
457	1278 2
509	14313 3
585	15337
701 7.09	157159
793	2008 1
820	3463 2
853	9790 2
881	45955 2
925	6150 3
988	42410 2
1022	9361 3
1084	8638
1119	531 2
1151	29731 2
1192	10526 3
1261	2845
1298	1212
1367	53525
1545	17606 2
1619	63285 2
1683	60384 2
1731	125867 3

TIME	AREA
218	2859 1
255	6355 1
289	14814 2
321	2494 2
351	36872 2
394	7195 3
476	2213 2
501	12929 2
525	9695 3
616	41274
655	624
722	125348
816	1233 1
842	2885 2
874	8094 2
902	40652 2
946	4930 3
1009	40945 2
1042	7818 3
1101	7672 2
1130	1899 2
1169	33104 2
1208	22162 3
1277	1928
1344	12307 2
1381	53704 3
1531	690 2
1554	3640 3
1649	21971 2
1689	4674 3
1745	86308



SAMPLE 82 DL

CONE FINDER

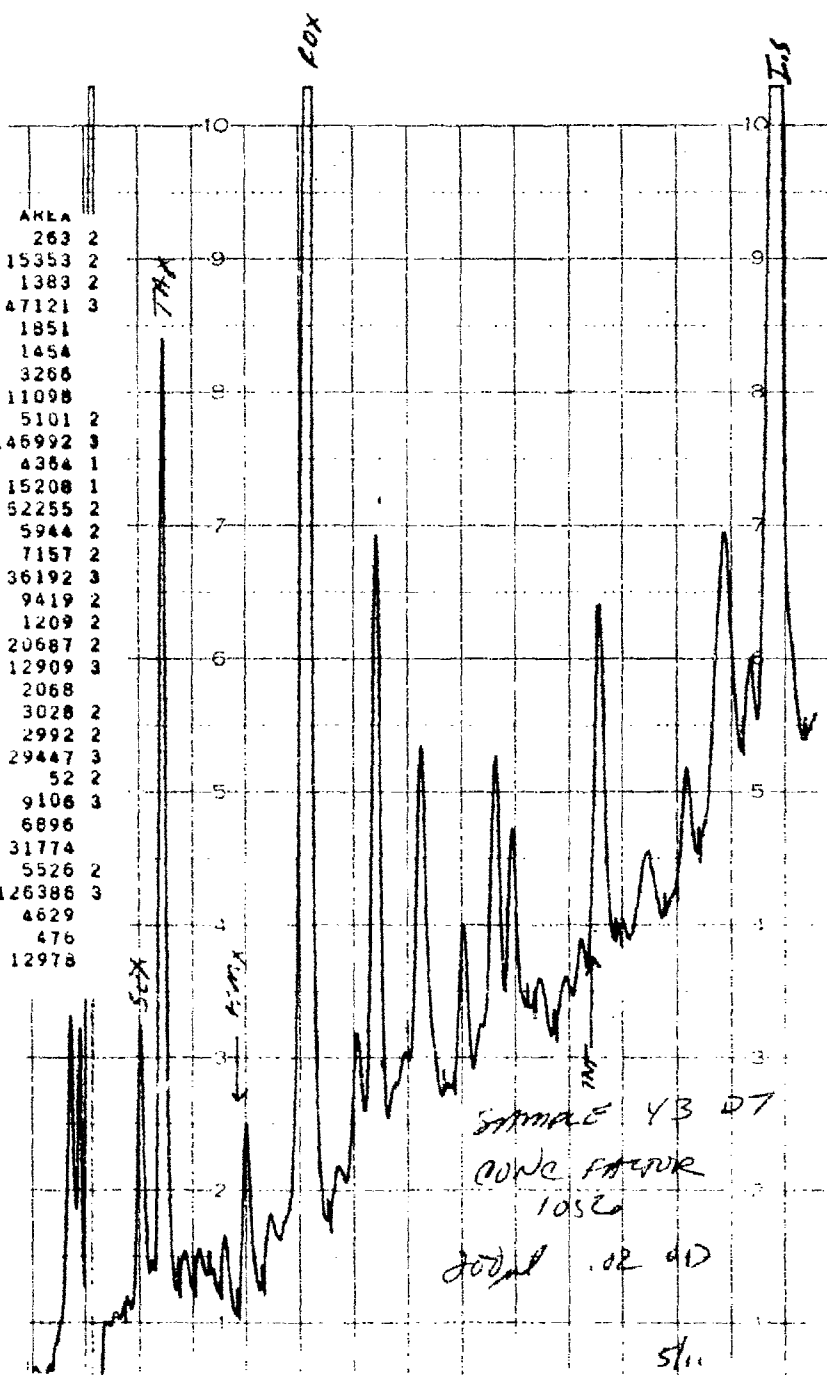
928

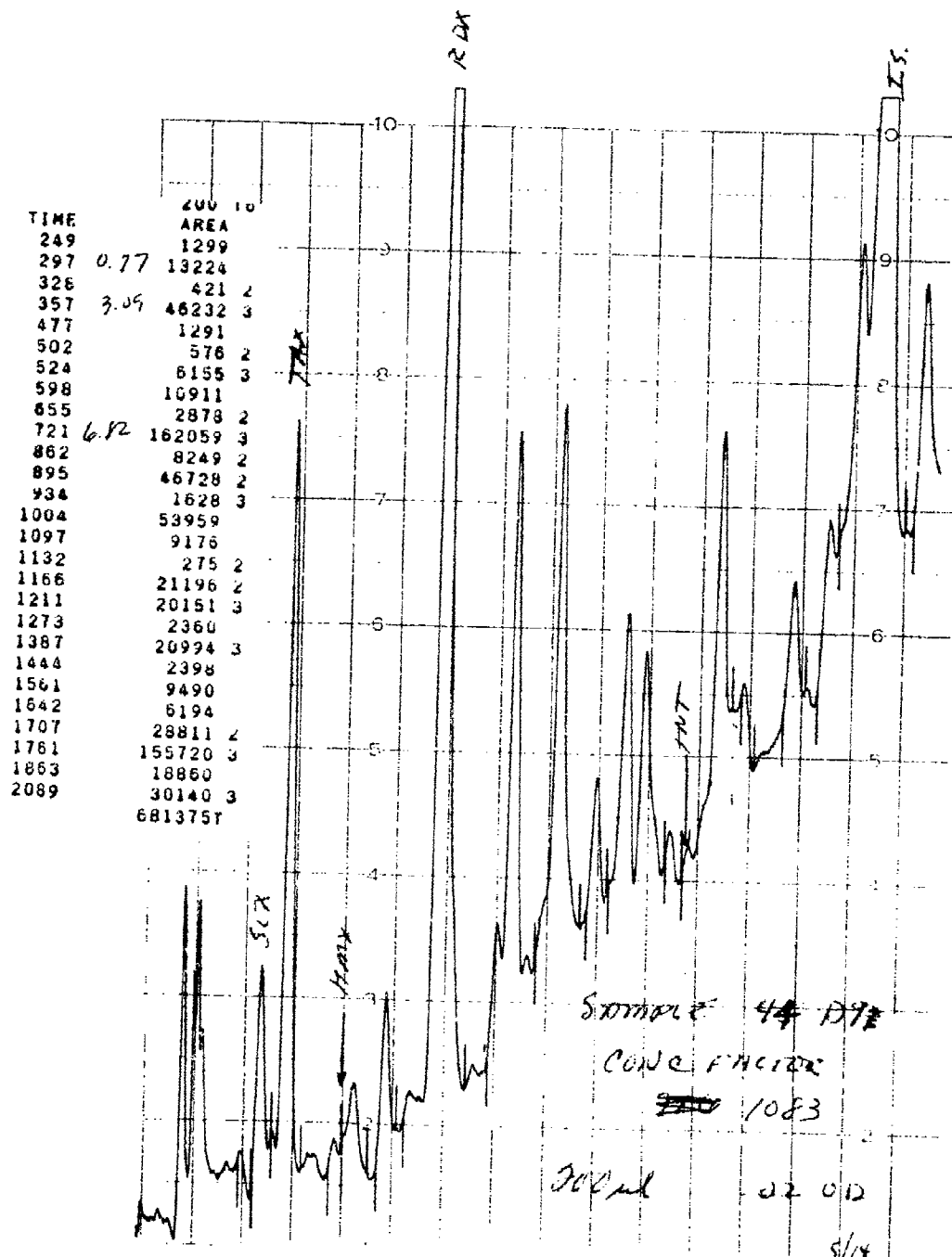
200 ml

02 073

12

TIME	AREA
226	263 2
259	15353 2
285	1383 2
309	47121 3
360	1851
394	1454
449	3266
500	11098
552	5101 2
629	146992 3
704	4364 1
745	15208 1
787	52255 2
827	5944 2
850	7157 2
887	36192 3
982	9419 2
1022	1209 2
1055	20687 2
1093	12909 3
1154	2068
1213	3028 2
1249	2992 2
1289	29447 3
1341	52 2
1394	9106 3
1465	6896
1569	31774
1628	5526 2
1679	126386 3
1786	4629
1843	476
1893	12978





TIME
6

D-10

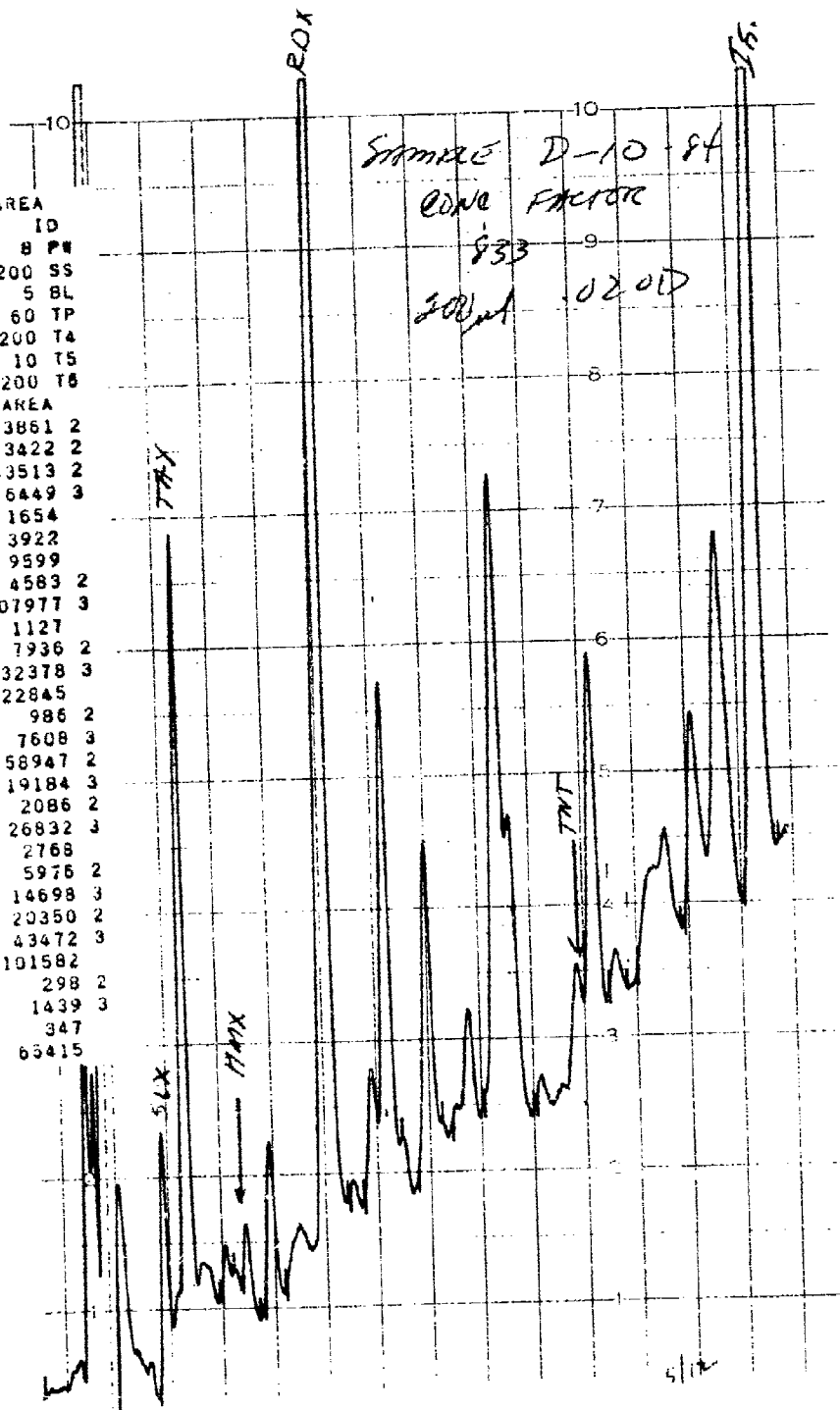
TIME

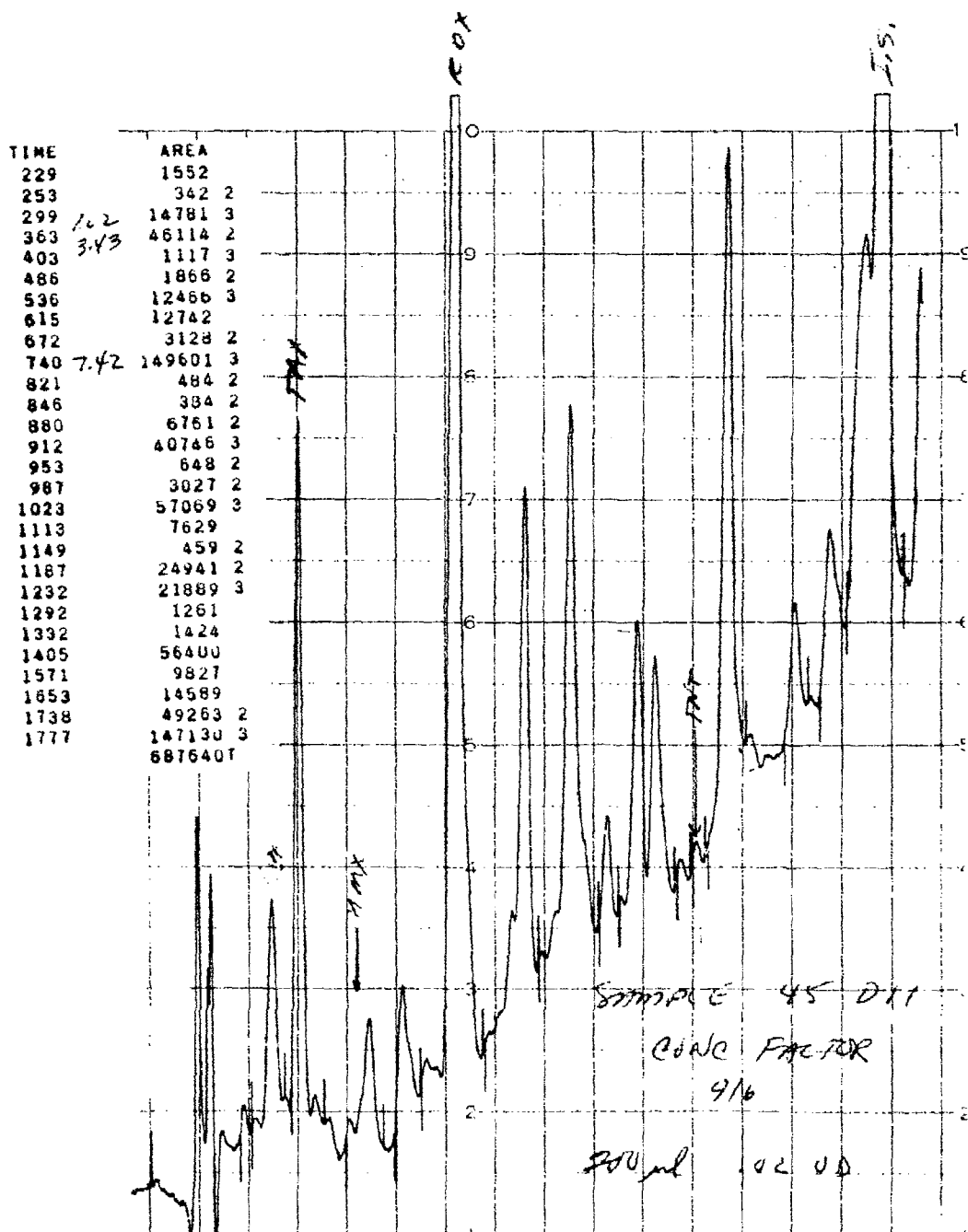
283 0.99
313
334 3.33
369
425
473
529
585
661 5.10
719
767
804
897
960
993
1066
1094
1248
1286
1337
1416
1455
1519
1582
1666
1741
1761
1783
1835

AREA

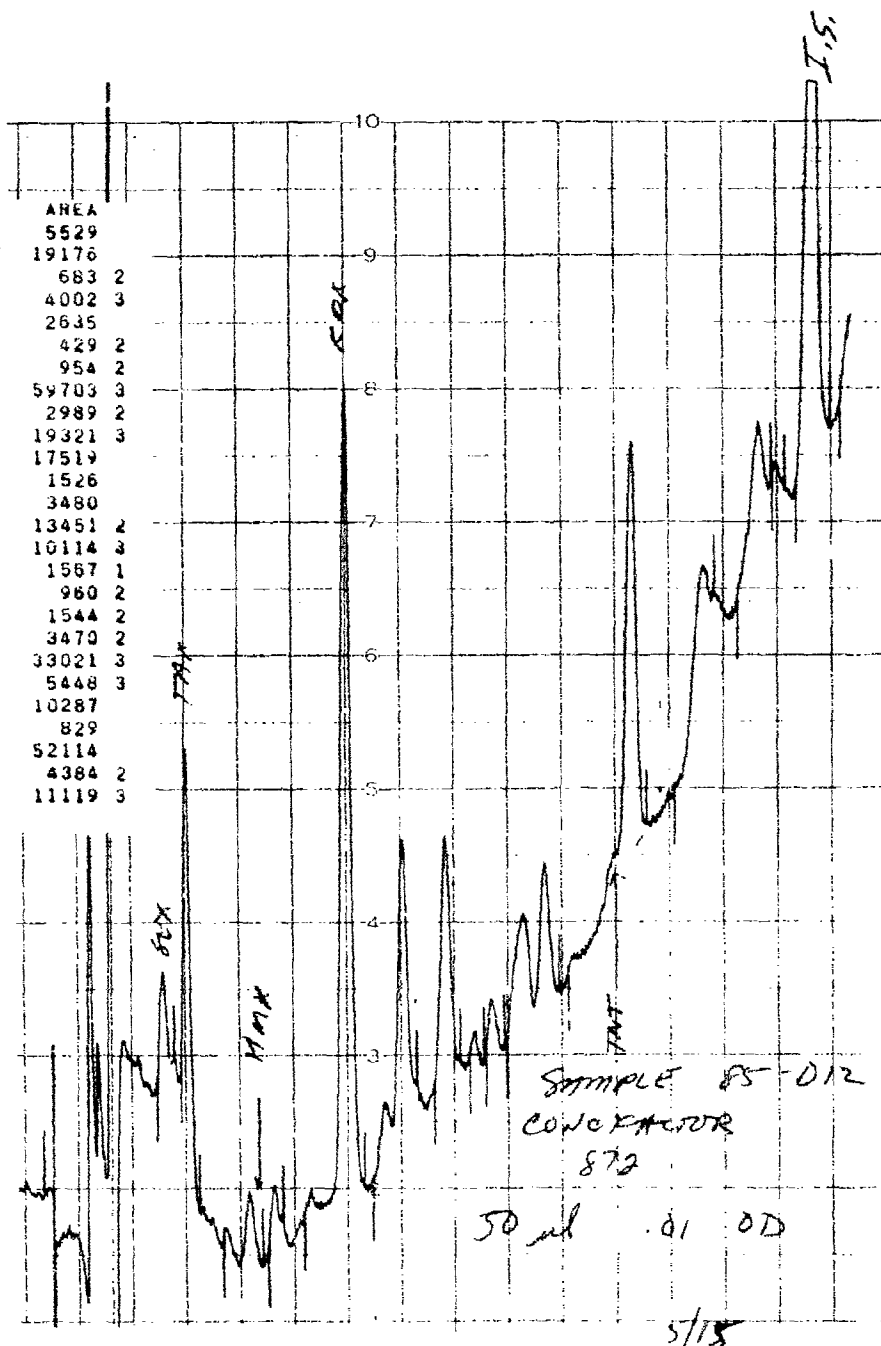
ID
8 PW
200 SS
5 BL
60 TP
2200 T4
10 T5
200 T6
AREA
13861 2
3422 2
43513 2
6449 3
1654
3922
9599
4583 2
107977 3
1127
7936 2
32378 3
22845
986 2
7608 3
58947 2
19184 3
2086 2
26832 3
2768
5976 2
14698 3
20350 2
43472 3
101582
298 2
1439 3
347
65415

SAMPLE D-10-84
CONE FACTOR
833
200 ft 0201D

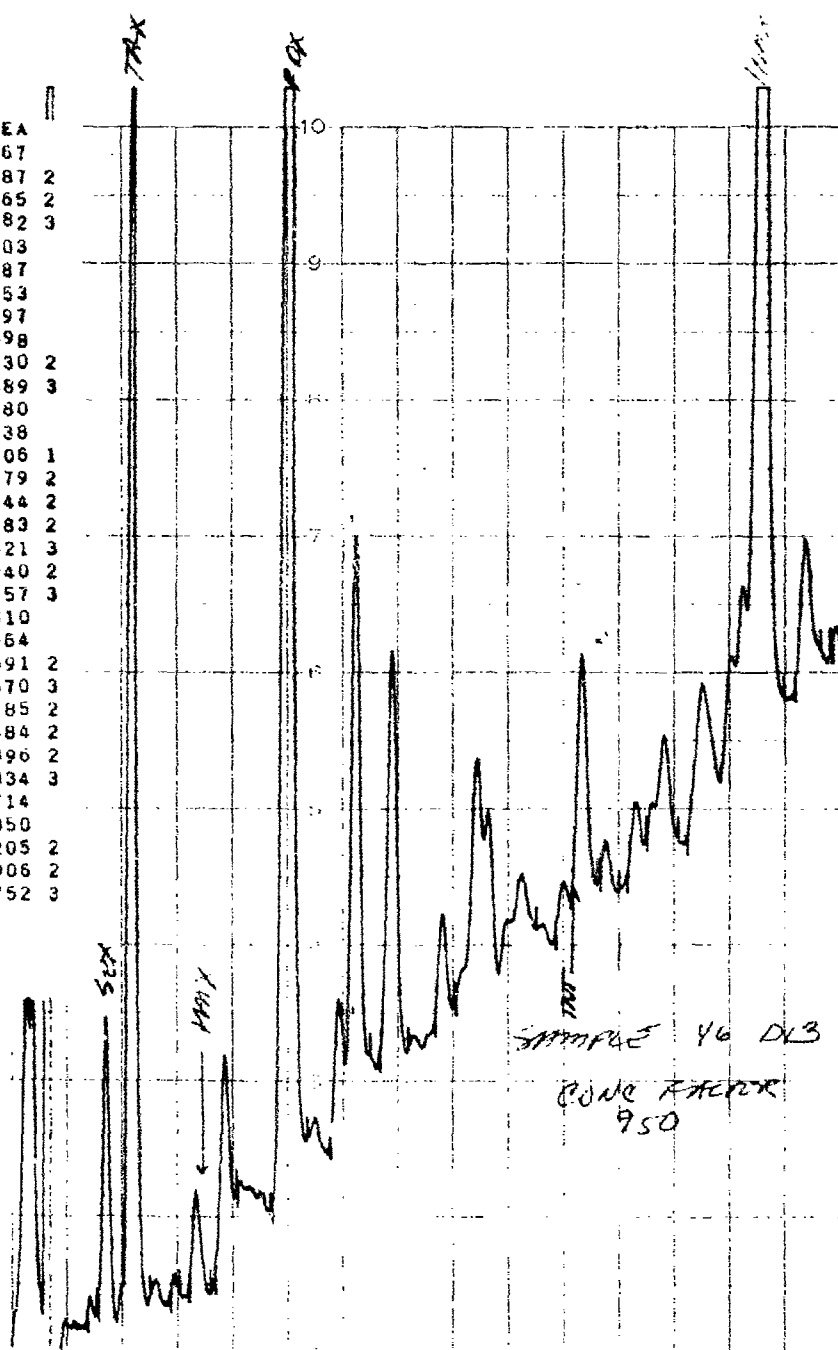




TIME	AREA
269 0.78	5529
324 2.89	19176
408	683 2
461	4002 3
519	2635
593	429 2
600	954 2
682 5.95	59703 3
770	2989 2
809	19321 3
907	17519
973	1526
1009	3480
1081	13451 2
1129	10114 3
1189	1567 1
1221	960 2
1258	1544 2
1283	3470 2
1321	33021 3
1481	5448 3
1607	10287
1643	829
1724	52114
1815	4384 2
1833	11119 3

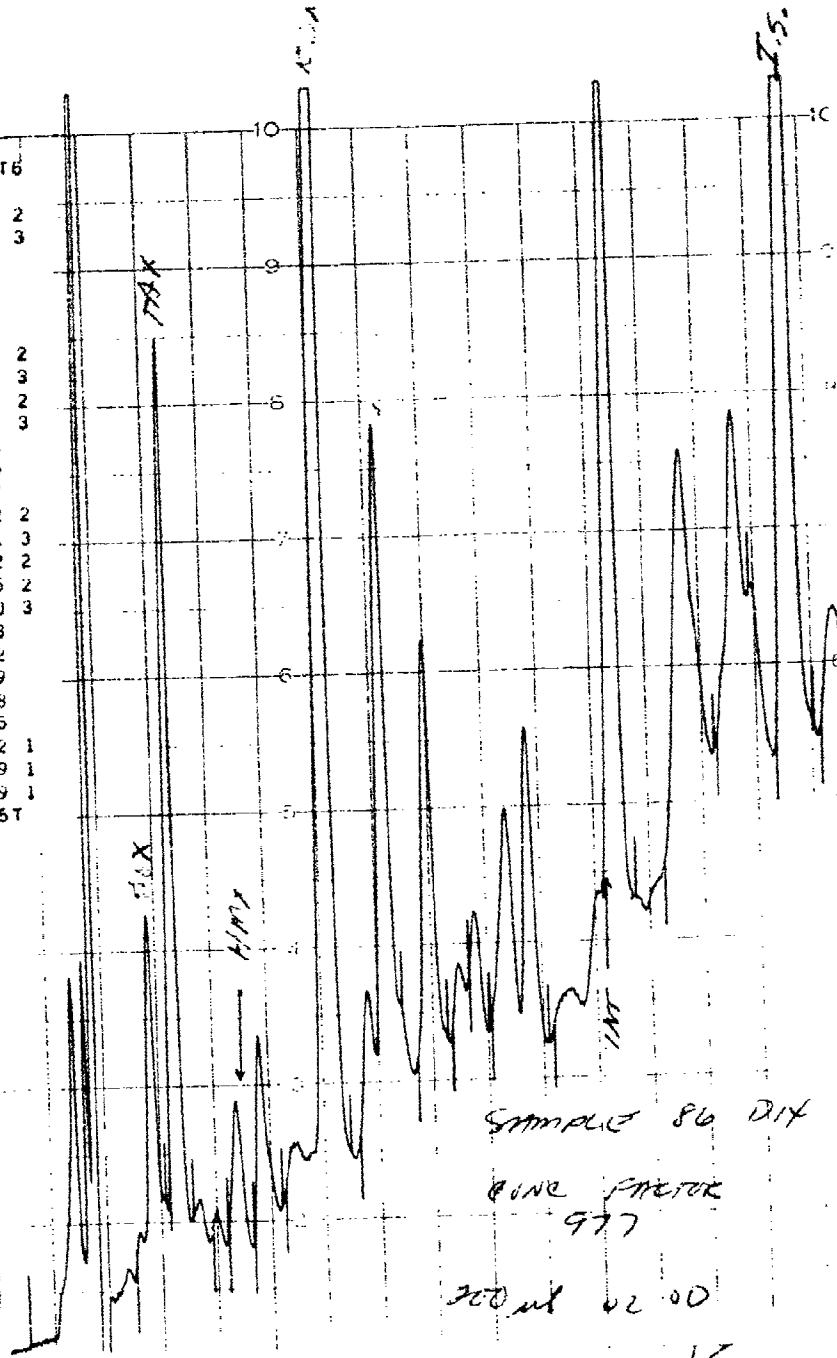


TIME	AREA	
238	667	
274 .9	15287	2
310	1065	2
330 4.1	68282	3
423	603	
472	6387	
537	10353	
565	2297	
669 5.5	134098	
784	8130	2
821	35889	3
900	29680	
1012	6138	
1055	1706	1
1086	17779	2
1109	9344	2
1150	2283	2
1183	5521	3
1274	3040	2
1315	18657	3
1368	2310	
1433	3964	
1470	1691	2
1497	7370	3
1581	15185	2
1642	7484	2
1669	12396	2
1706	111034	3
1806	9714	
1869	1050	
1910	22205	2
2008	32906	2
2063	2752	3



TIME

TIME	AREA	
247	1302	2
279	17796	3
332	45129	
418	1318	
465	10574	
520	14362	
586	5579	2
672	141249	3
762	7939	2
801	44032	3
898	30164	
961	2826	
996	5557	
1070	21342	2
1117	22351	3
1182	1262	2
1270	3245	2
1309	76100	3
1466	59653	
1585	21632	
1699	106289	
1793	8848	
1841	5593	
1929	6412	1
2097	44329	1
2180	14589	1
	7134757	



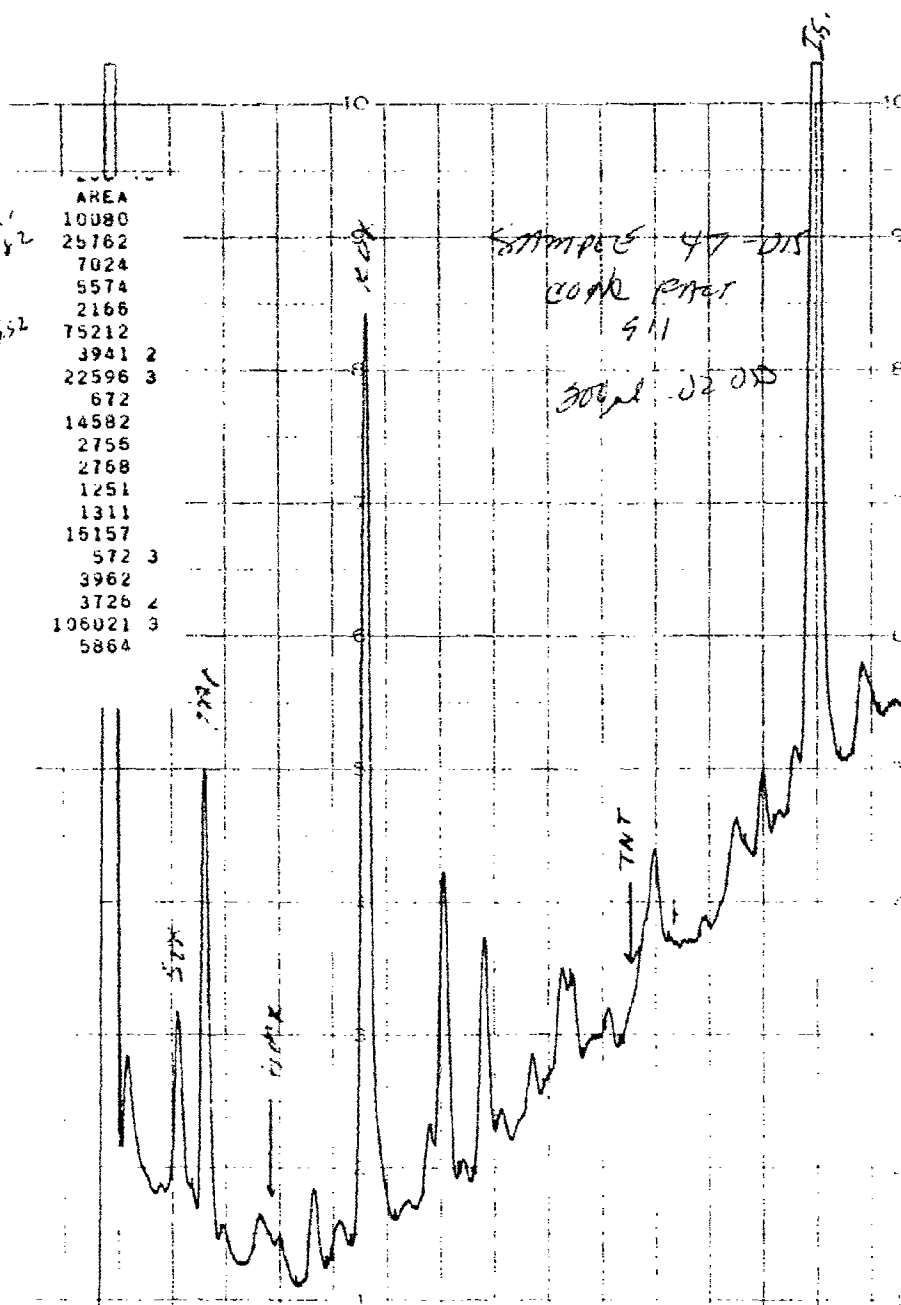
SAMPLE 86 DIF

PURE FRETOR
977

200 ml 02 00

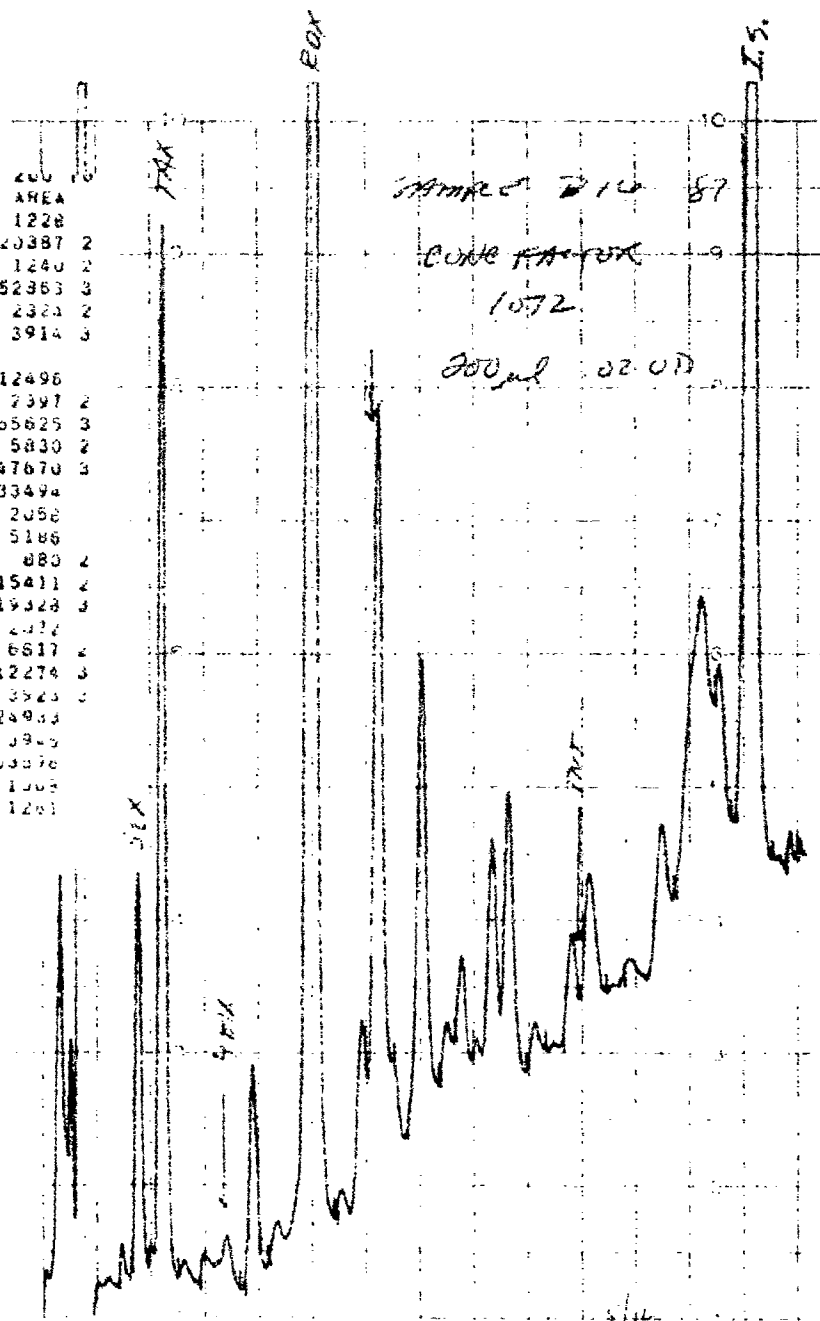
4/15

TIME	AREA
277	10080
337	25762
456	7024
578	5574
633	2166
697	75212
843	3941 2
875	22596 3
913	672
966	14582
1074	2756
1141	2768
1162	1251
1244	1311
1348	15157
1530	572 3
1592	3962
1661	3726 4
1706	106021 3
1813	5864



SAMPLE 47-DIS
COAK PHOT
911
304 ml 0200

TIME		200	AREA
242			1228
280	1.1	20387	2
309		1240	2
333	31	52363	3
429		2321	2
479		3914	3
541		12496	
591		7397	2
669	6.0	165625	3
785		5830	2
821		47670	3
918		33494	
973		2058	
1008		5186	
1041		880	2
1076		15411	2
1113		19328	3
1172		2072	
1255		6617	2
1293		12274	3
1458		3823	
1549		24033	
1589		3945	
1656		103376	
1748		1008	
1775		1201	



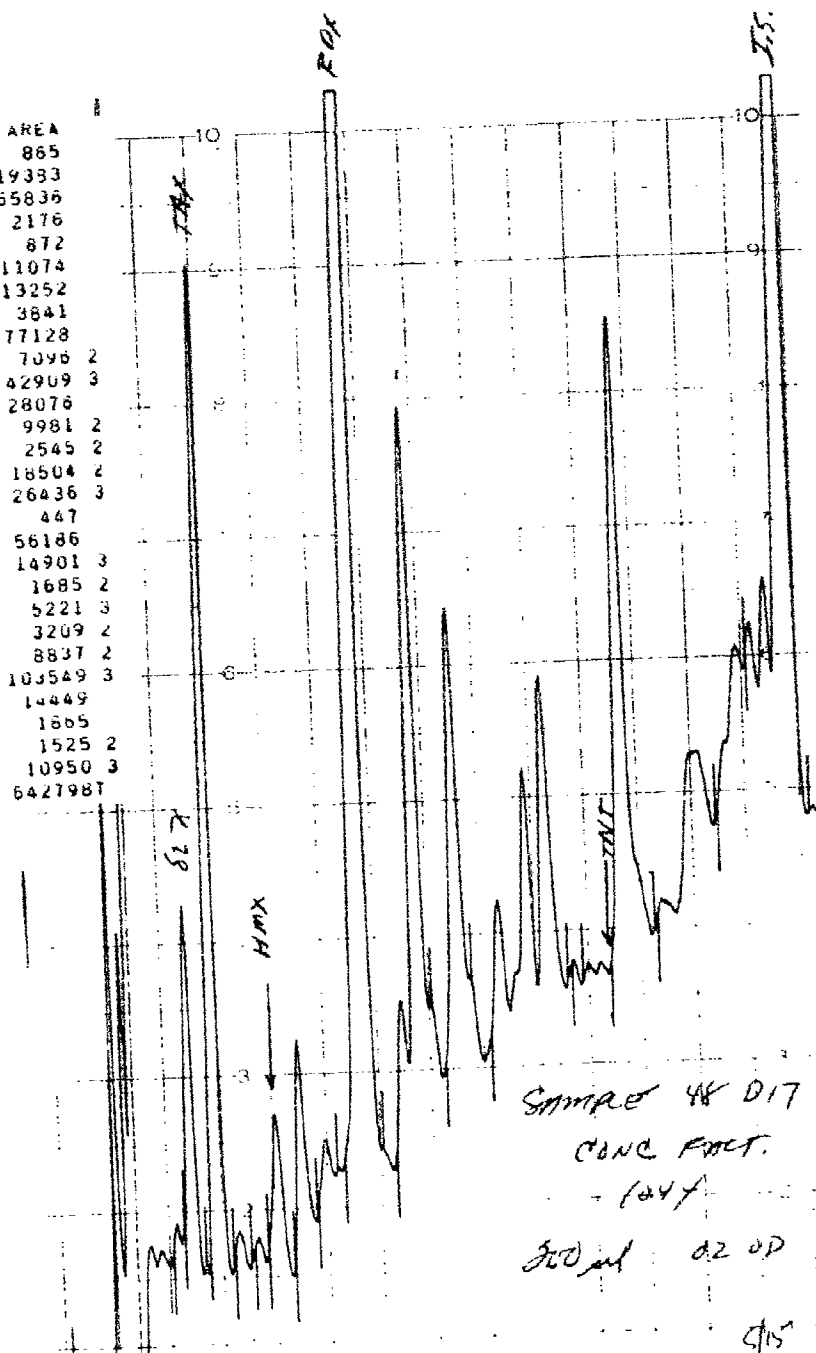
SAMPLE 210 87

CODE FAX FOX

1072

200 ul 22.0 D

TIME	AREA
245	865
280	19333
336	55836
385	2176
425	872
475	11074
531	13252
586	3841
671	177128
767	7096 2
802	42909 3
894	28076
968	9981 2
1024	2545 2
1054	18504 2
1097	26436 3
1153	447
1273	56186
1428	14901 3
1507	1685 2
1539	5221 3
1571	3209 2
1605	8837 2
1647	103549 3
1741	14449
1804	1665
1895	1525 2
2075	10950 3
	6427987



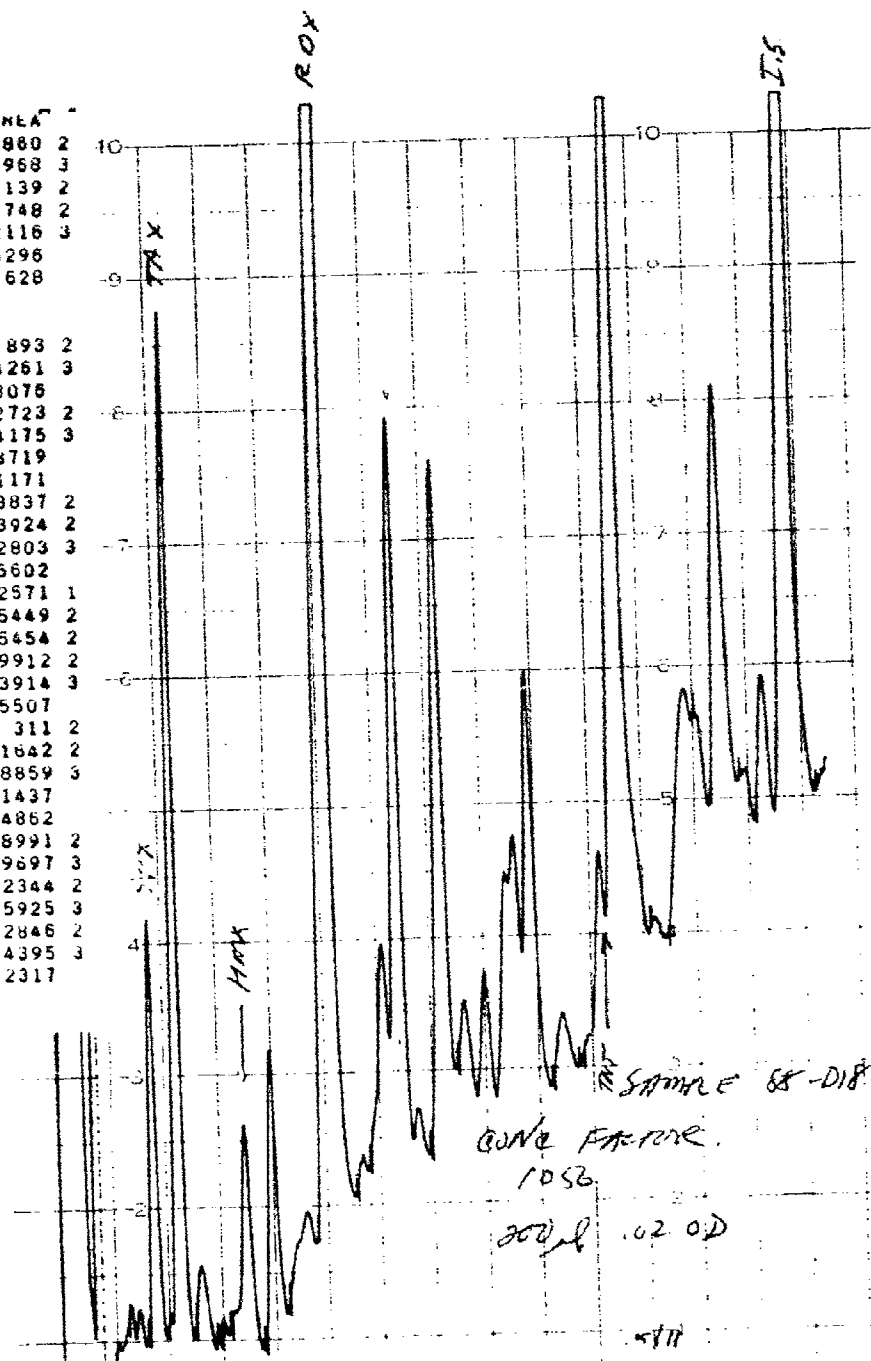
SAMPLE 48 D17
 CONC. FACT.
 - (104)

300 ml 02 00

4/15

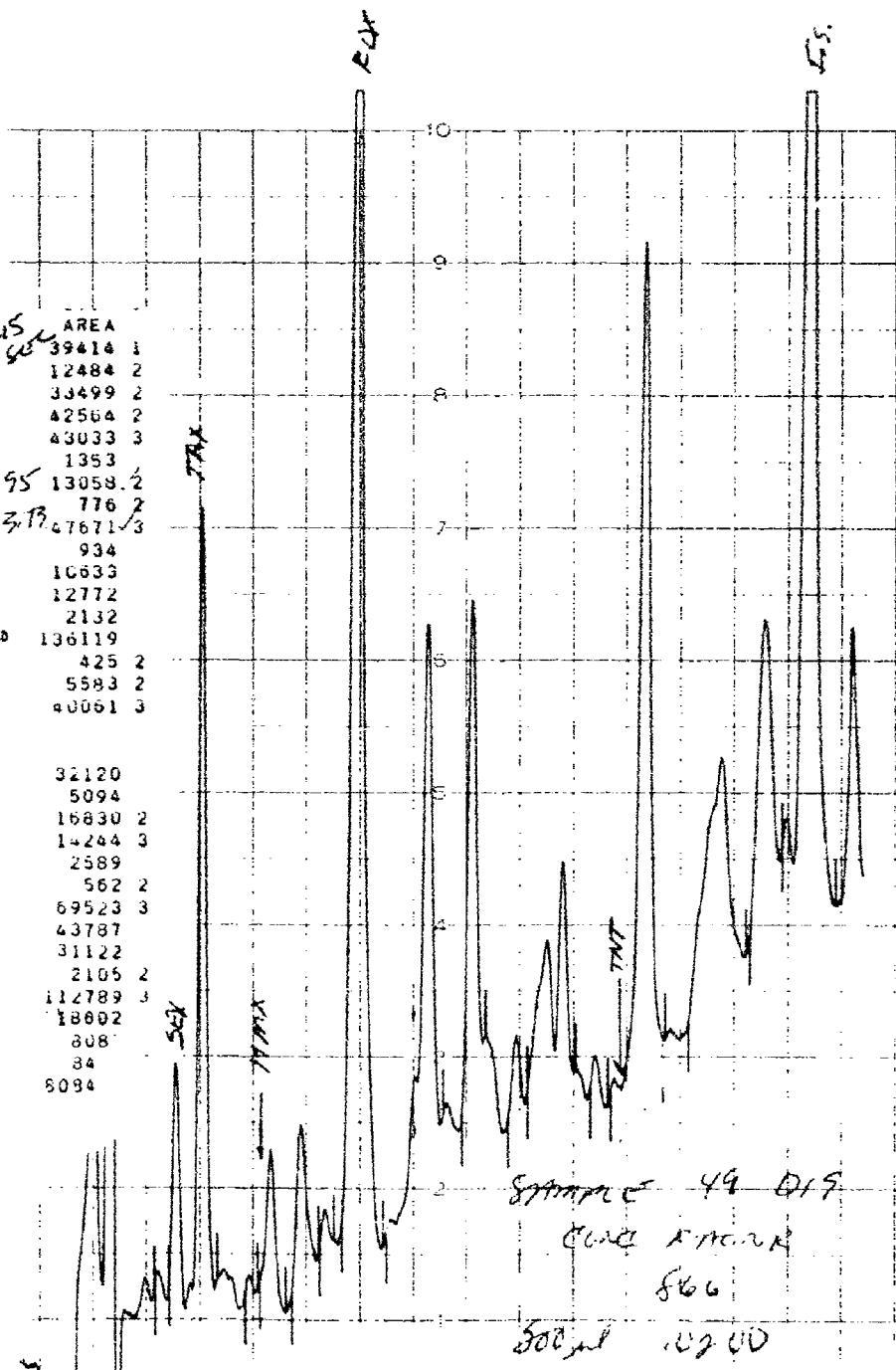
TIME	AREA	
216	880	2
237	968	3
273	21139	2
305	748	2
328	52116	3
377	5296	
423	628	

449	893	2
480	14261	3
540	18076	
597	2723	2
616	4175	3
668	193719	
745	1171	
797	18837	2
833	53924	2
872	2803	3
932	46602	
982	2571	1
1029	5449	2
1082	15454	2
1102	19912	2
1137	33914	3
1208	5507	
1261	311	2
1296	11642	2
1335	118859	3
1490	11437	
1569	34862	
1667	8991	2
1724	109697	3
1915	2344	2
1932	5925	3
1879	2846	2
1898	34395	3
1981	12317	



TIME	AREA	
320	39414	1
348	12484	2
360	33499	2
368	42564	2
435	43033	3
464	1353	
505	13058	2
536	776	2
563	47671	3
670	934	
720	10633	
767	12772	
840	2132	
911	136119	
989	425	2
1044	5583	2
1074	40061	3

1174	32120	
1273	5094	
1341	16830	2
1379	14244	3
1452	2589	
1493	562	2
1561	69523	3
1735	43787	
1833	31122	
1880	2105	2
1930	112789	3
2029	18002	
2103	808	
2149	34	
	8094	



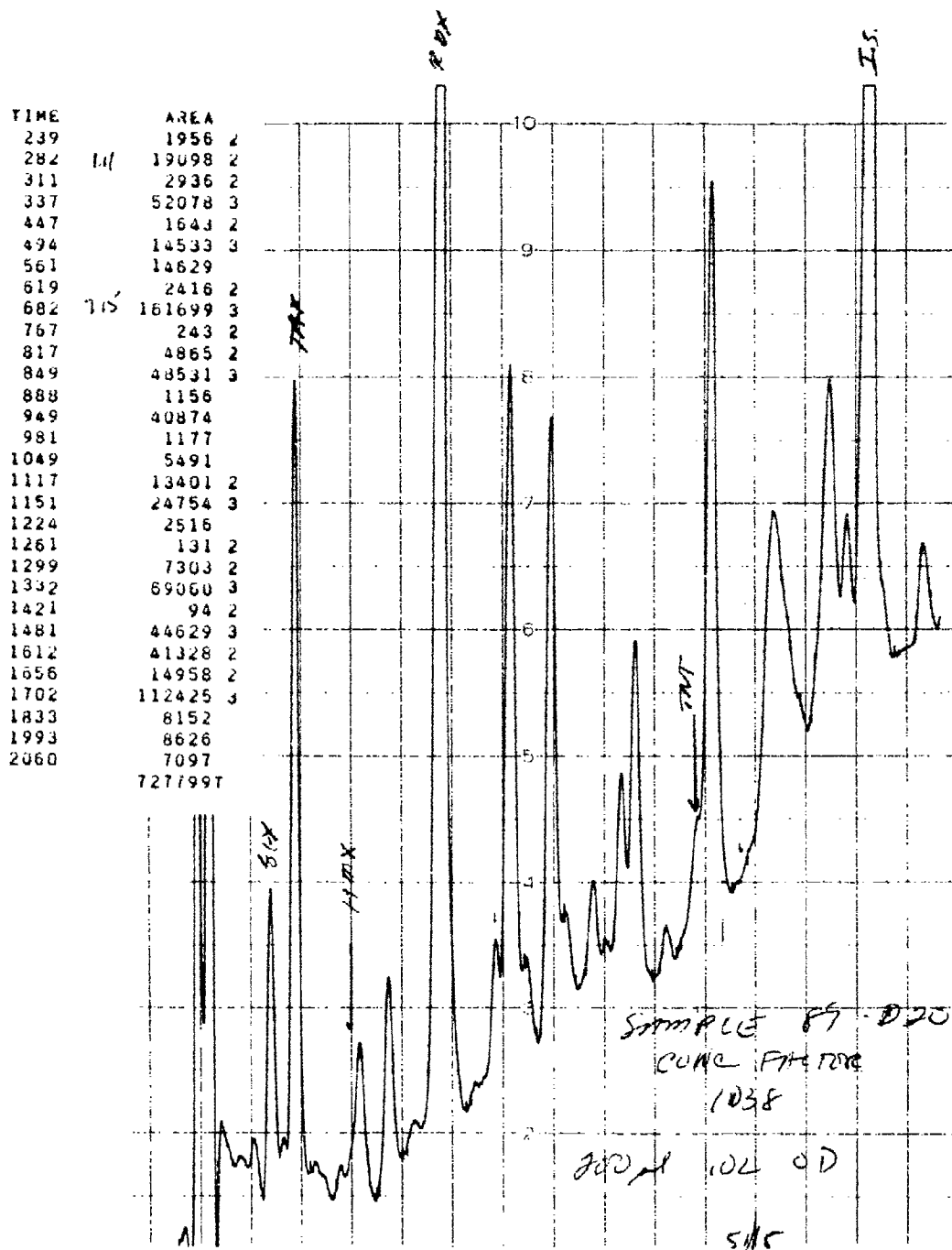
SAMPLE 49 DIS

CHROMA MARK

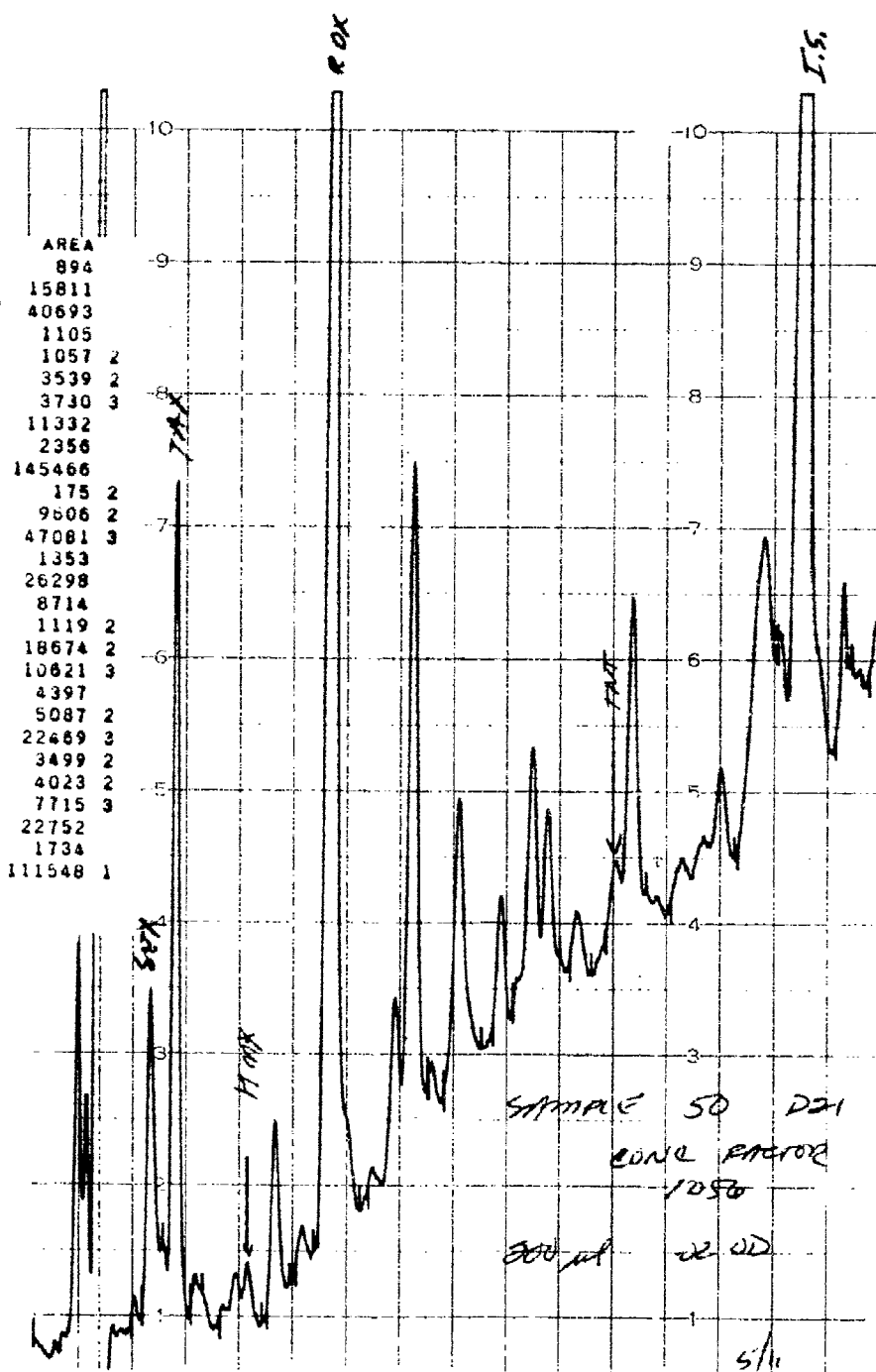
866

500 ml 10200

515



TIME	AREA
233	894
268	15811
322	40693
369	1105
428	1057 2
460	3539 2
487	3730 3
550	11332
609	2356
670	145466
769	175 2
817	9506 2
856	47081 3
901	1353
963	26298
1058	8714
1095	1119 2
1129	18674 2
1165	10621 3
1231	4397
1319	5087 2
1356	22469 3
1462	3499 2
1510	4023 2
1557	7715 3
1652	22752
1688	1734
1735	111548 1



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