(ii) Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State shall be considered exempt under C.4(c)(3)(i), provided that the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device, and provided further that they meet the requirements of C.28(c).

Dose level Sooner Dri Co. site

(iii) Gas and aerosol detectors containing NARM previously manufactured and distributed in accordance with a specific license issued by a Licensing State shall be considered exempt under C.4(c)(3)(i), provided that the device is labeled in accordance with the specific license authorizing distribution, and provided further that they meet the requirements of C.28(c).

NCRP Report 45 estimates

(4) Resins containing Scandium-46 and Designed for Sand Consolidation in Oil Wells. Any person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns or acquires synthetic plastic resins containing scandium-46 which are designed for sand consolidation in oil wells. Such resins shall have been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or shall have been manufactured in accordance with the specifications contained in a specific license issued by the Agency or any Agreement State to the manufacturer of such resins pursuant to licensing requirements equivalent to those in Sections 32.16 and 32.17 of 10 CFR Part 32 of the regulations of the U.S. Nuclear Regulatory Commission. This exemption does not authorize the manufacture of any resins containing scandium-46.

dose due to terrestrial 25 to 40 mR/yr

Rad exposure at site

say, 500 mR/hr on the site is not significant if only occasional or if short

e.g., 500 mR/hr X 8 hr = 4000 mR = 4 mR

9527477

Chronology
Sooner Dial Co. file

RLC inspection 6-23-65
Phone call To Charles Owens, Gen Mgr 12-12-66
— do — 12-13-66
Memo, J. M. Conlon to file 12-20-66

RLC inspection report 6-30-65

Letter to Owens re recommendations 12-20-66

Memo to file from RLC follow-up 9-29-67
9-11-67 call at shop - use of Ra^{226} discontinued

RLC memo to file re survey of site on 1-24-85 2-5-85

Letter to Grubbs from Kellogg 2-7-85

RLC memo to file re visit to Grubb's office & further survey of site on 2-11-85 2-13-85

RLC memo to file re results of soil samples collected 2-11-85 3-11-85

RLC memo to ~~file~~ MSC re recent activities 3-15-85

RLC memo to MSC re remedial actions	3-18-85
DMC memo to MSC re additional investigative issues	3-21-85
W.B. Truby memo to file re RLC/WT visit to Clinton	4-25-85
RLC memo to MSC re 7-1-85 visit to site + Clinton	7-3-85
RLC memo to file re Wachert site + survey thereof	4-23-86
RLC memo to MSC re Wichert site survey	4-28-86
PHB memo to H.A. re 4-24-90 survey of both sites	6-29-90

Hospital – 100 N, 30th
Health Dept. Office – 3000 Custer

Jerry Thiesson, R.S.
Dick Moles, R.S.
David Wattenbarger, Reg. Admin.

183 exit to Mobelle, then W to 10th
then S – 4 blocks to Sooner Dial
or W on Mobelle to 3000 block then
N or S to H.D. Office

Pete Davis – 7-90

LeRoy Rader – in South Community OKC

$24 \times 30 \times 12 = 300 \times 29 = 8010$

$8000 \times 1000\ \mu R/hr = 8 \times 10^6\ \mu R/yr$
$8 \times 10^3 \times 1 \times 10^3 = 8\ mR/$

Dr. Zuhair Al Shieb Geology Dept OSU Stillwater
* Dr John W. Shelton Massier Corp Tulsa
sp.

Survey, Sooner Dial
neighborhood, Clinton 9-6-90

Location	Car Direction	S.D. Direction to	MPH	cpm
10th & Knox, NW	S	S	~4	800
8th & Knox, SW	E	SW	4	900
6th & Opal, NW	S	SW	4+	1200
8th & Opal, NW	W	SW	4	800
Parking lot, 829 S. 10th Satellite Connection	SW	SW	4	1000
Corner W of 703 JC Lane	W	W	4	1000
Wonder World (Old TG&Y) parking lot, near bldg		W	W 3½	800
United parking lot, near 10th Street (directly across from Sooner Dial)	W	W	4+	800
alley gas meter NW corner of surplus bldg	N	NE	13	2500
in alley directly behind Sooner Dial	N	E	15	3000
in alley near fire plug	N	E-SE	15	3000
S 13 & Englewood	S	E	4	1000
Adams Ave & Circle Dr (S side Adams Ave)	E	NE	3½	600
in front of 1009 Circle Dr.	NE	E	5	1100
Wilson St NE corner of Starcade Bldg	E	S	4½	1100
Behind Atwoods bank of drainage ditch	SE	NW	4½	1200

South ~~side~~ site

NE corner of truck wash facility	N/NE	N/NE	4	1000
Vacant lot N of 1420 S 14th	SW	N	3+	800

all readings taken w/ detectors in car —

NaI crystal was centerline of car ~~@~~ just behind windshield glass on top of dashboard

NR meter was on top of dashboard behind NaI crystal

Mel Wells, citizen who stopped us re vacant bldg on S 14th Street

Army
Navy
Store
Buick
concrete
light
pole
pole
pillars
(X)

Briefing memo – short summary
of last 2 meeting

next meeting – 3pm, 8-28

Jeanette Eng will send me some documents

She advises —

1. cost may be high (> $1 x 10^6) unless we are lucky
2. definitely recommends getting CERLA/EPA assistance
3. Downside —
   a. lack of remediation competence
   b. slow response possible
4. let EPA handle as much as possible if they agree to do site
   let remediation (Ohle) do remediation matters
5. maintain veto or oversight on everything EPA proposes
6. go out of own way to the extremes to keep locals (Co. H.D. at the least) & to use the knowledge of local conditions & concerns

Jeanette Eng (N.J.) 609-987-2072 ~~2133~~
Colorado 303-331-8480
Ro 226 ~~wastes~~ — Duncan White 609-987-6364

1. guides (#'s), such as high-low-medium for soil + surfaces

2. Protocol for clean-up - site assessment plans

3. use of CERCLA?

4. Financing - state pays, owner of site pays, how arranged/paid

5. Who did clean-up? - state,
state oversight of contractor
owner of property
DOE, EPA

6. use of DOE?

7. public relations + news media
- problems or not
- how handled

8. regulatory authority

Jeff Red returned by Mr. Gutt
to determine $ cost of clean up

DMC needs to find N.J. materials
needs to review N.J. materials
then needs to xerox appropriate
materials to Jeff Red
(above re radium removal & clean up
procedures, in particular)

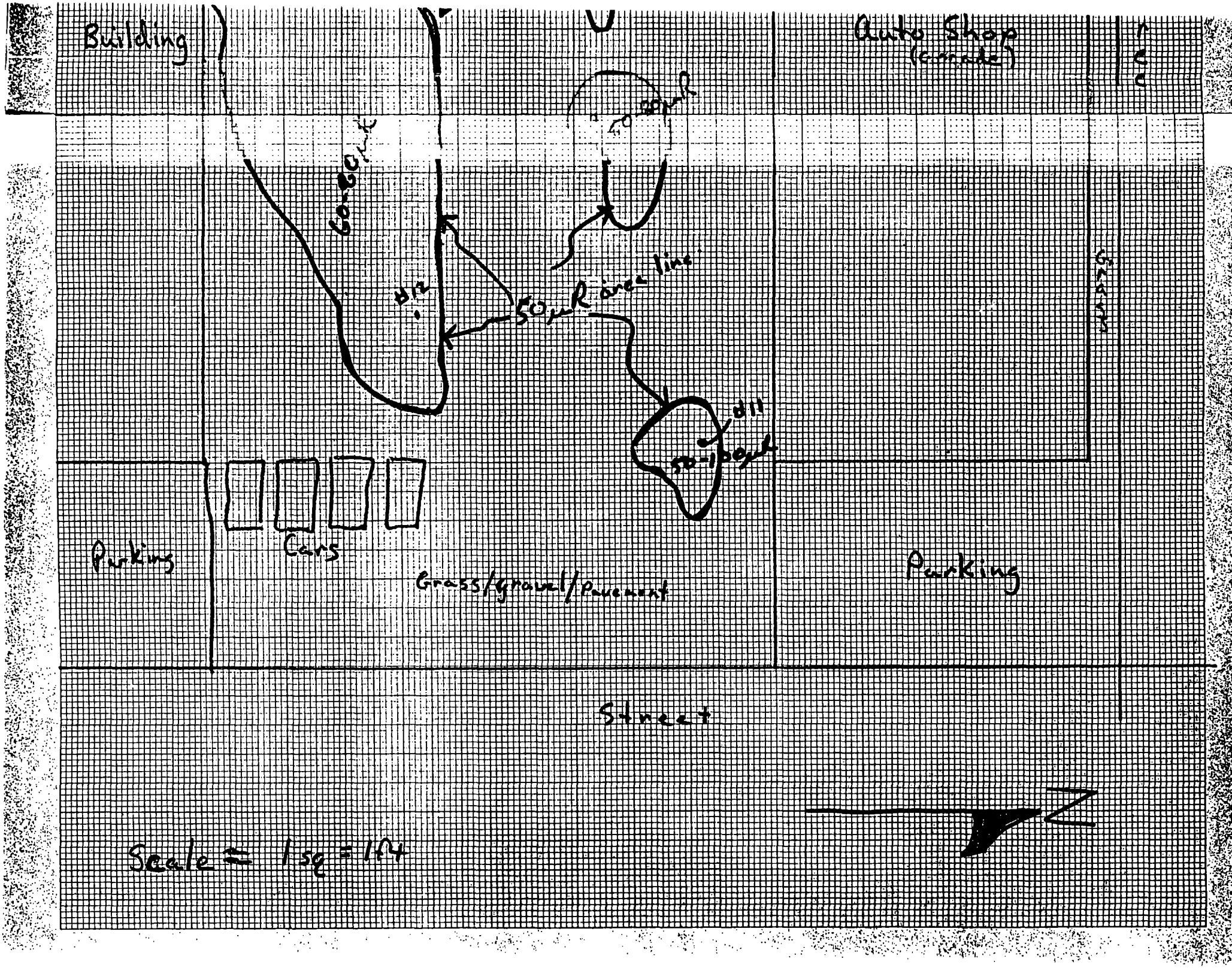
Summary of meeting —
1. what about surfacing/covering over?
2. Clinton to hire H.P.?
3. OSDM to fence site
4. public hearing/public meeting
5. release limits
6. to core or not
7. lab facilities
8. public relations/public perceptions

per 1985 news article

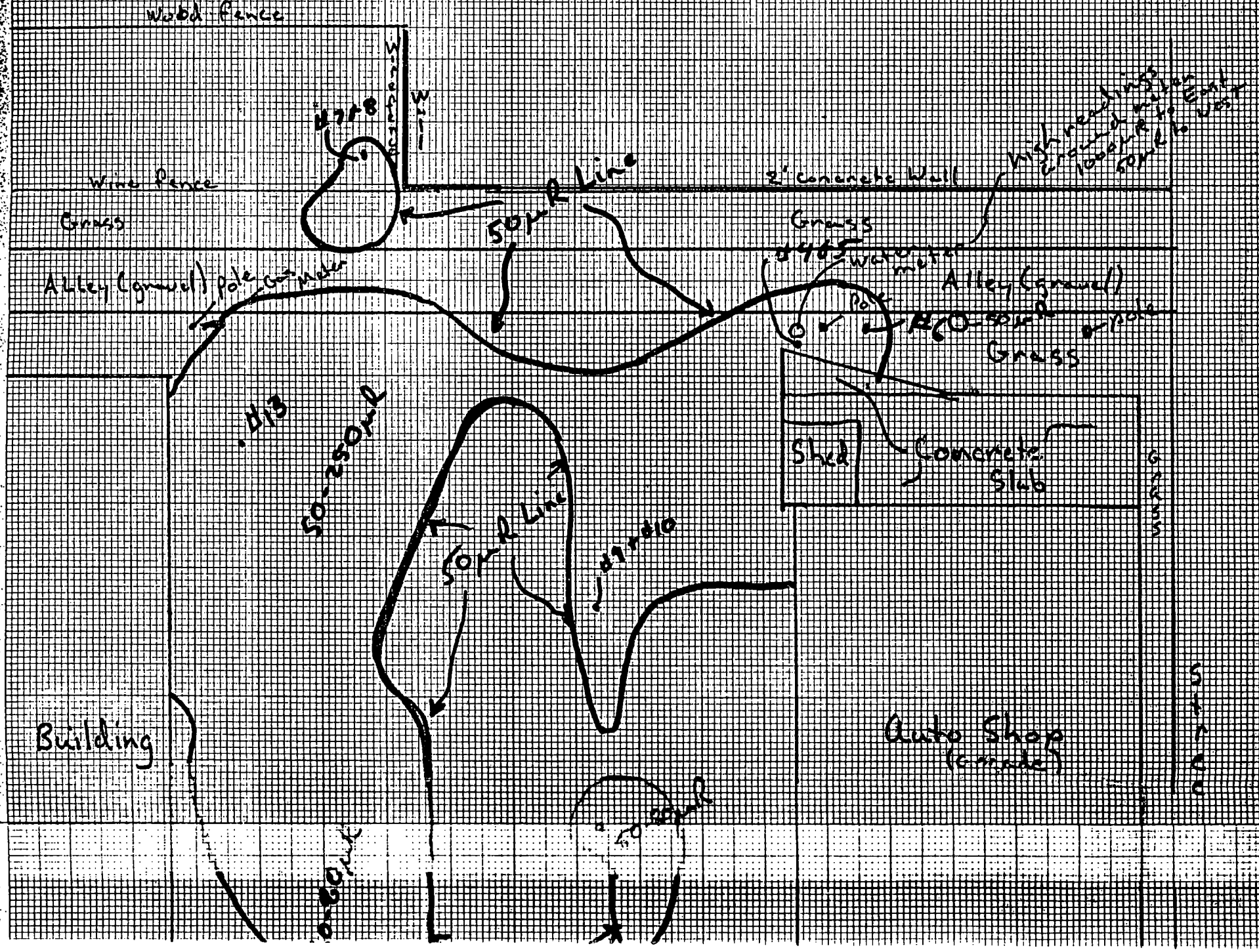
$32/ft³ EnviroCare

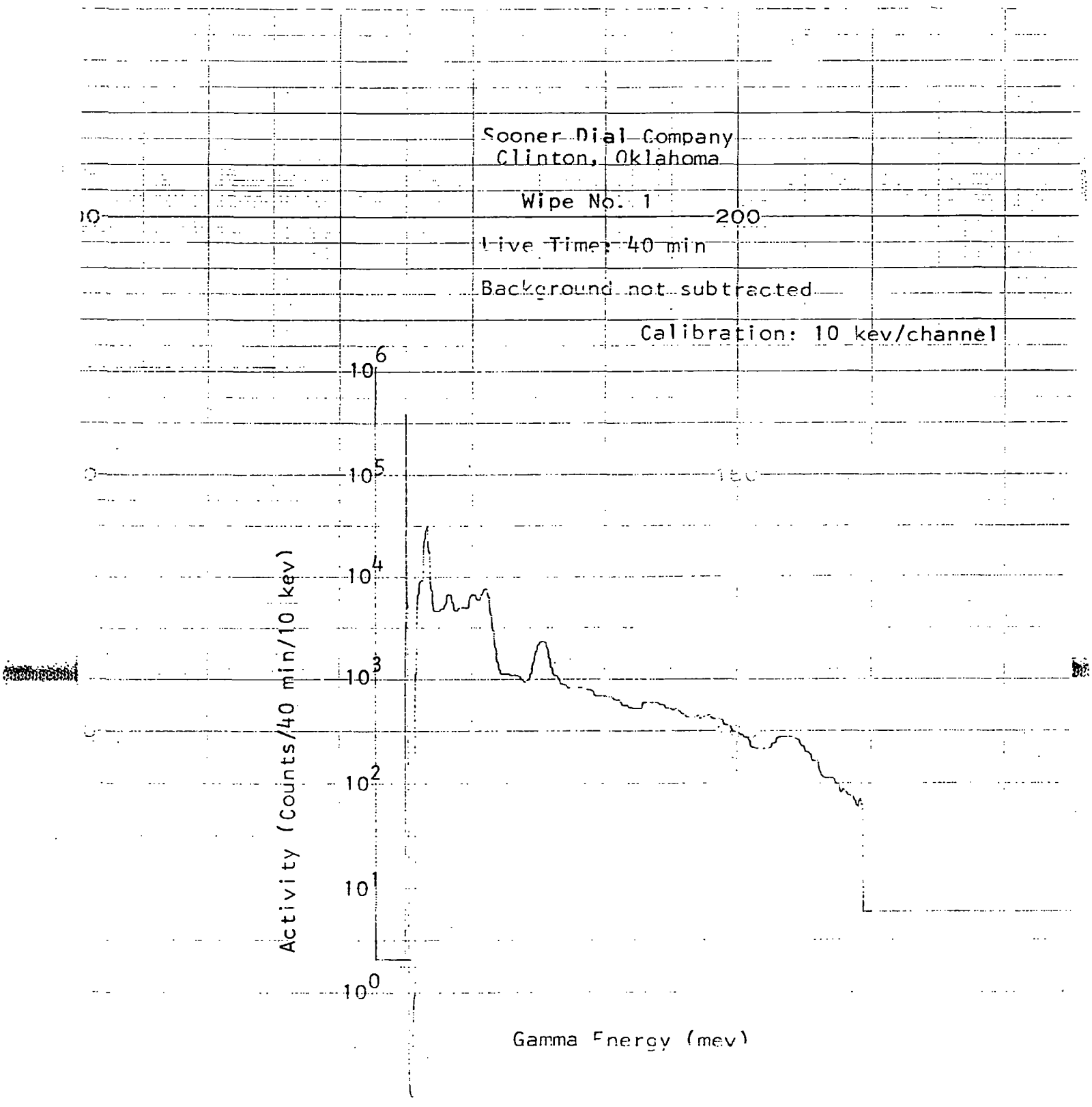
32 X 7.5 = $225 X 80 = $16K
2K

80 → $2200


Building
Auto Shop
(Garage)
Garage
Parking
Cars
Grass/gravel/pavement
Parking
Street
Scale = 1sq = 1ft

Sooner Dial


Wood Fence
Wire Fence
Grass
Alley (gravel)
pole
gas meter
Wire
Wire
50 ft line
2' concrete Wall
highest point
Grass
water meter
Alley (gravel)
Pole
Grass
pole
Shed
Concrete Slab
Grass
50-250 ft
50 ft line
Building
Auto Shop (concrete)
Grass


Sooner Dial Company
Clinton, Oklahoma
Wipe No. 1
Live Time: 40 min
Background not subtracted
Calibration: 10 kev/channel
200
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Activity (Counts/40 min/10 kev)
Gamma Energy (mev)

200004000	000000	000000	001043	001532	001767	001898	001724	001343	001019
210000790	000617	000444	000343	000310	000247	000213	000176	000195	000152
220000152	000161	000139	000150	000137	000132	000129	000106	000118	000109
230000084	000100	000092	000106	000087	000100	000066	000070	000081	000068
240000067	000064	000068	000057	000052	000066	000076	000059	000079	000079
250000062	000058	000049	000053	000040	000044	000048	000047	000048	000051
260000043	000044	000054	[illegible]	[illegible]	[illegible]	000038	000036	000046	000034
270000036	000042	000041	000031	000029	000028	000040	000032	000033	000035
280000032	000033	000034	000028	000029	000035	000028	000029	000030	000028
290000023	000026	000028	000023	000040	000029	000032	000024	000026	000030
300000026	000024	000023	000023	000026	000024	000028	000028	000020	000035
310000023	000015	000022	000020	000023	000018	000018	000016	000015	000025
320000015	000016	000014	000019	000015	000013	000016	000013	000013	000011
330000010	000017	000015	000014	000012	000013	000014	000020	000022	000020
340000014	000021	000017	000015	000011	000014	000012	000009	000007	000008
350000010	000012	000008	000007	000014	000010	000005	000004	000007	000004
360000005	000005	000007	000002	000003	000010	000008	000002	000004	000003
370000004	000001	000001	000002	000006	000004	000001	000005	000002	000007
380000002	000004	000003	000000	000002	000003	000004	000001	000004	000003
390000005	000004	000003	000002	000004	000000	000003	000004	000001	000007

9301

200004000	000000	000000	000002	000053	000247	000350	000345	000674	000693
210000426	000272	000238	000219	000258	000272	000251	000304	000303	000289
220000287	000225	000241	000228	000252	000238	000236	000214	000240	000247
230000225	000196	000186	000228	000235	000212	000188	000139	000133	000112
240000077	000088	000072	000077	000072	000076	000064	000076	000095	000076
250000075	000073	000065	000076	000072	000069	000071	000103	000083	000102
260000096	000076	000058	000065	000060	000046	000044	000044	000054	000047
270000043	000045	000048	000053	000041	000049	000047	000045	000041	000051
280000036	000035	000032	000044	000029	000044	000034	000040	000046	000044
290000043	000044	000040	000032	000036	000038	000038	000036	000029	000032
300000037	000032	000030	000030	000035	000031	000033	000032	000034	000027
310000020	000025	000017	000038	000038	000027	000018	000028	000025	000025
320000027	000018	000014	000013	000025	000024	000019	000026	000020	000019
330000019	000015	000025	000013	000019	000017	000019	000017	000018	000018
340000015	000018	000023	000028	000027	000017	000011	000015	000010	000013
350000011	000010	000009	000008	000013	000013	000009	000011	000013	000007
360000009	000009	000010	000008	000008	000010	000008	000006	000006	000012
370000005	000007	000009	000015	000007	000005	000008	000005	000006	000006
380000004	000001	000005	000005	000003	000005	000004	000003	000003	000007
390000006	000007	000000	000006	000000	000005	000003	000003	000003	000003

11931

2630

460 dpm

200004000	000036	000000	000002	000102	000489	000644	000677	001480	001579
210000766	000405	000347	000364	000395	000386	000391	000411	000525	000497
220000369	000347	000362	000399	000398	000324	000316	000357	000478	000422
230000380	000343	000371	000428	000410	000386	000325	000225	000177	000131
240000142	000130	000111	000103	000098	000101	000085	000121	000091	000102
250000108	000129	000087	000088	000103	000119	000126	000152	000159	000178
260000164	000144	000110	000114	000084	000075	000079	000065	000063	000067
270000073	000084	000060	000075	000076	000065	000071	000057	000066	000070
280000056	000062	000062	000059	000066	000059	000076	000052	000052	000059
290000050	000070	000050	000044	000057	000055	000041	000039	000049	000043
300000050	000045	000046	000037	000049	000051	000051	000044	000049	000052
310000046	000033	000045	000037	000041	000041	000043	000044	000032	000025
320000046	000026	000030	000026	000035	000033	000035	000035	000034	000021
330000031	000042	000024	000032	000029	000032	000029	000030	000031	000021
340000029	000040	000032	000024	000040	000018	000025	000018	000018	000015
350000033	000033	000017	000013	000018	000013	000018	000013	000019	000012
360000016	000019	000017	000016	000017	000017	000023	000026	000017	000018
370000014	000010	000018	000010	000013	000004	000007	000011	000009	000007
380000009	000008	000011	000007	000009	000011	000005	000011	000011	000010
390000005	000008	000006	000008	000007	000004	000004	000007	000005	000001

18,964

9663

1691 dpm

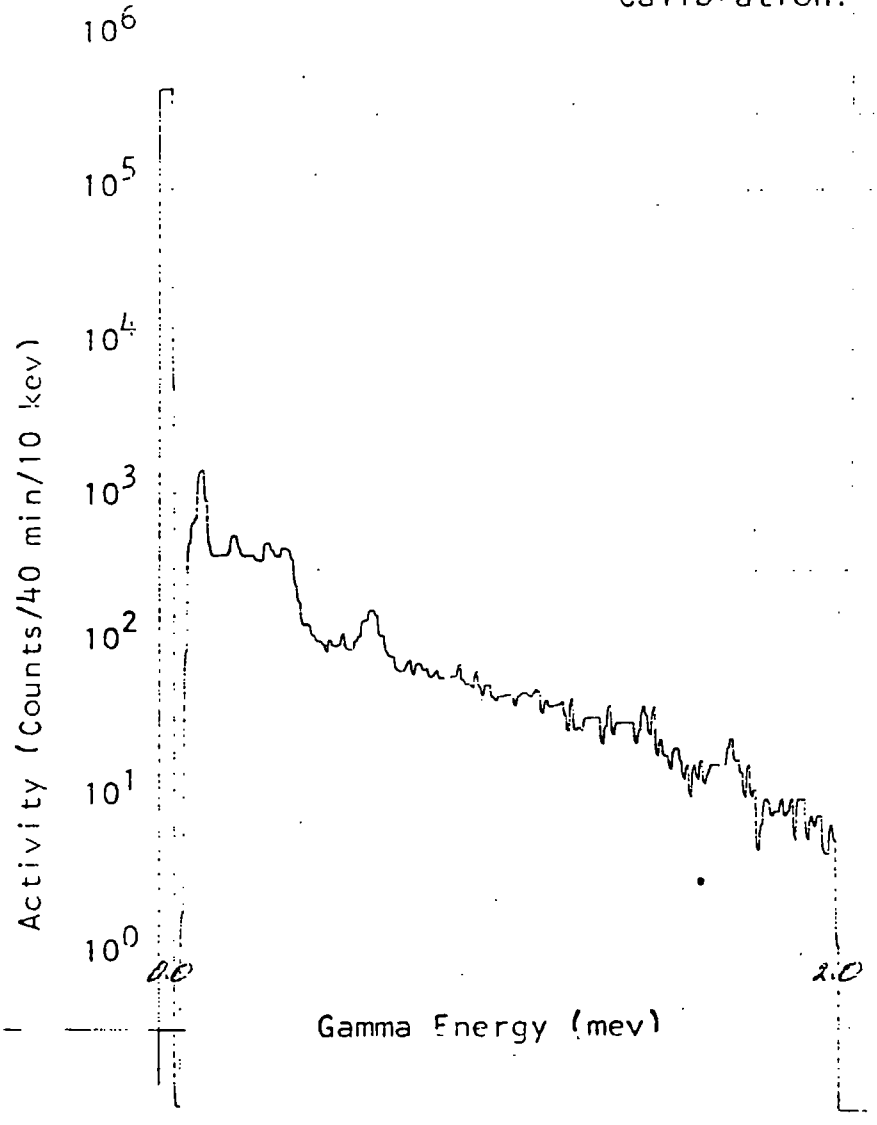
Sooner Dial Company
Clinton, Oklahoma

Wipe No. 5

Live Time: 40 min.

Background not subtracted

Calibration: 10 kev/channel



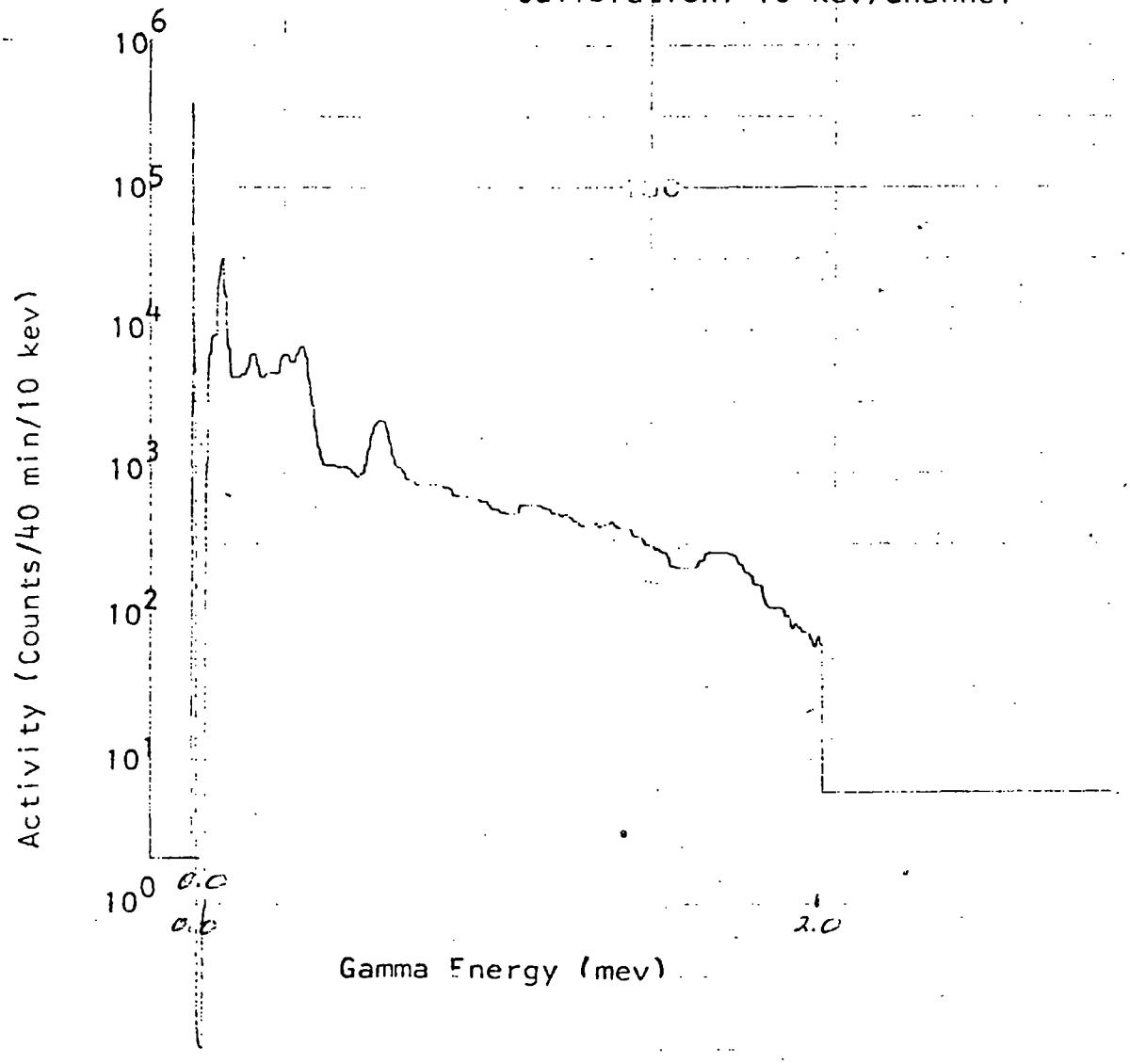
Sooner Dial Company
Clinton, Oklahoma

Wipe No. 1

Live Time: 40 min

Background not subtracted

Calibration: 10 kev/channel



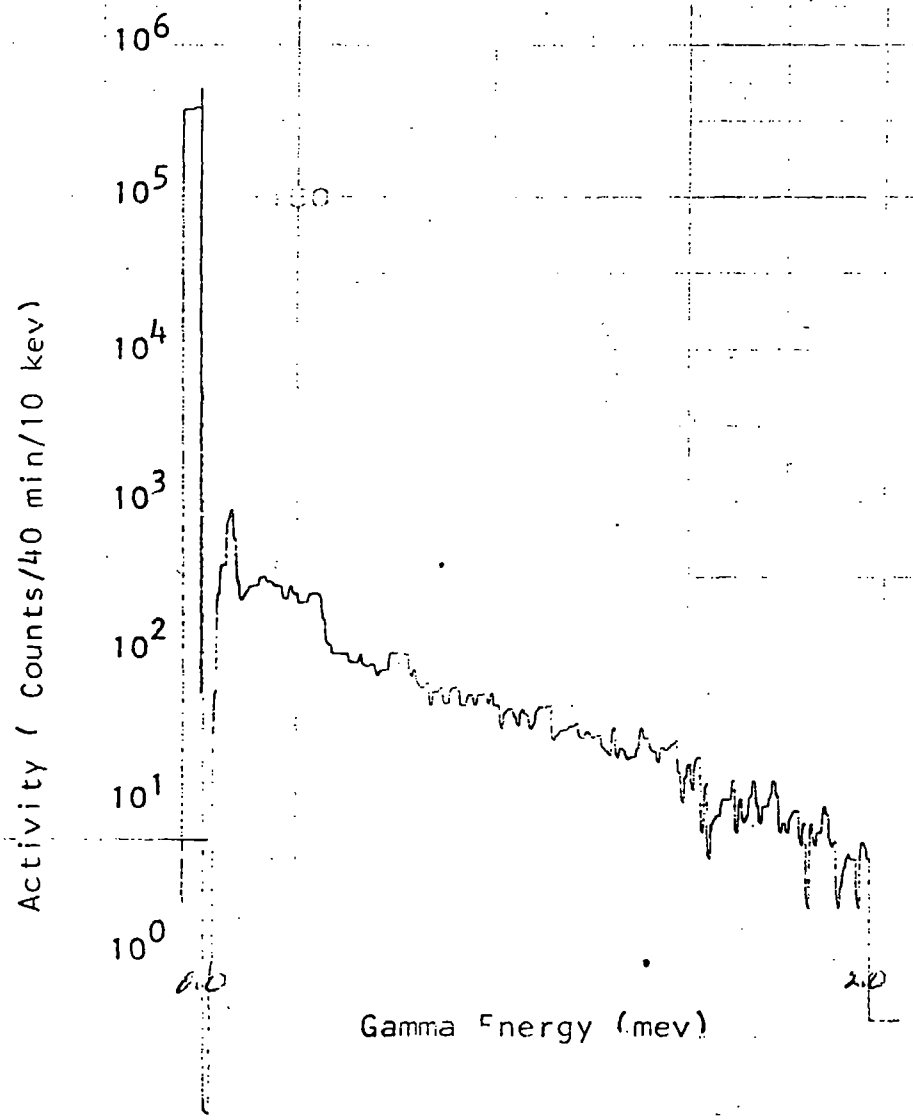
Sooner Dial Company
Clinton, Oklahoma

Wipe No.2

Live Time: 40 min

Background not subtracted

Calibration: 10 kev/channel



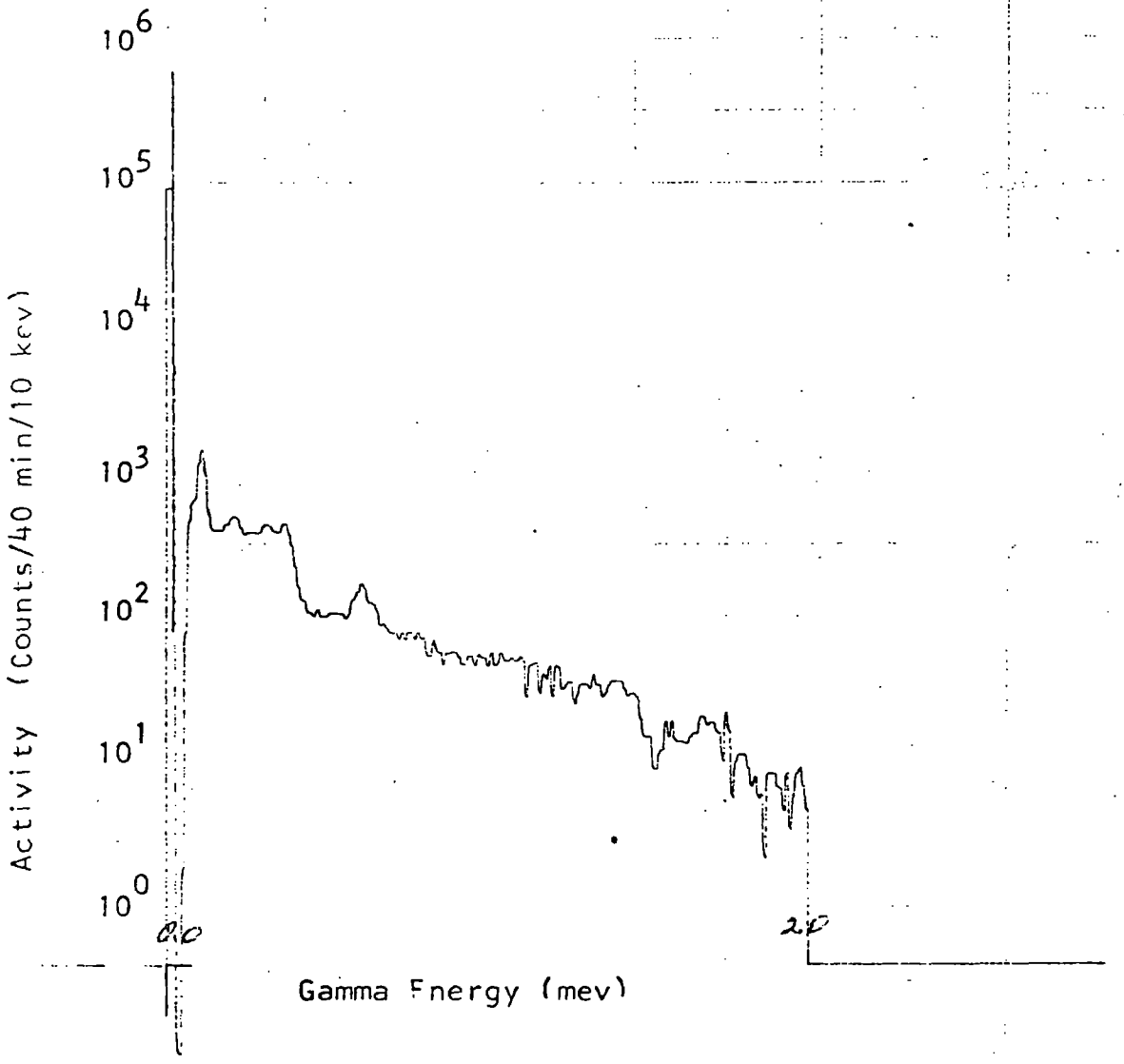
Sooner Nail Company
Clinton, Oklahoma

Wipe No. 3

Live Time: 40 min

Background not subtracted

Calibration: 10 kev/channel



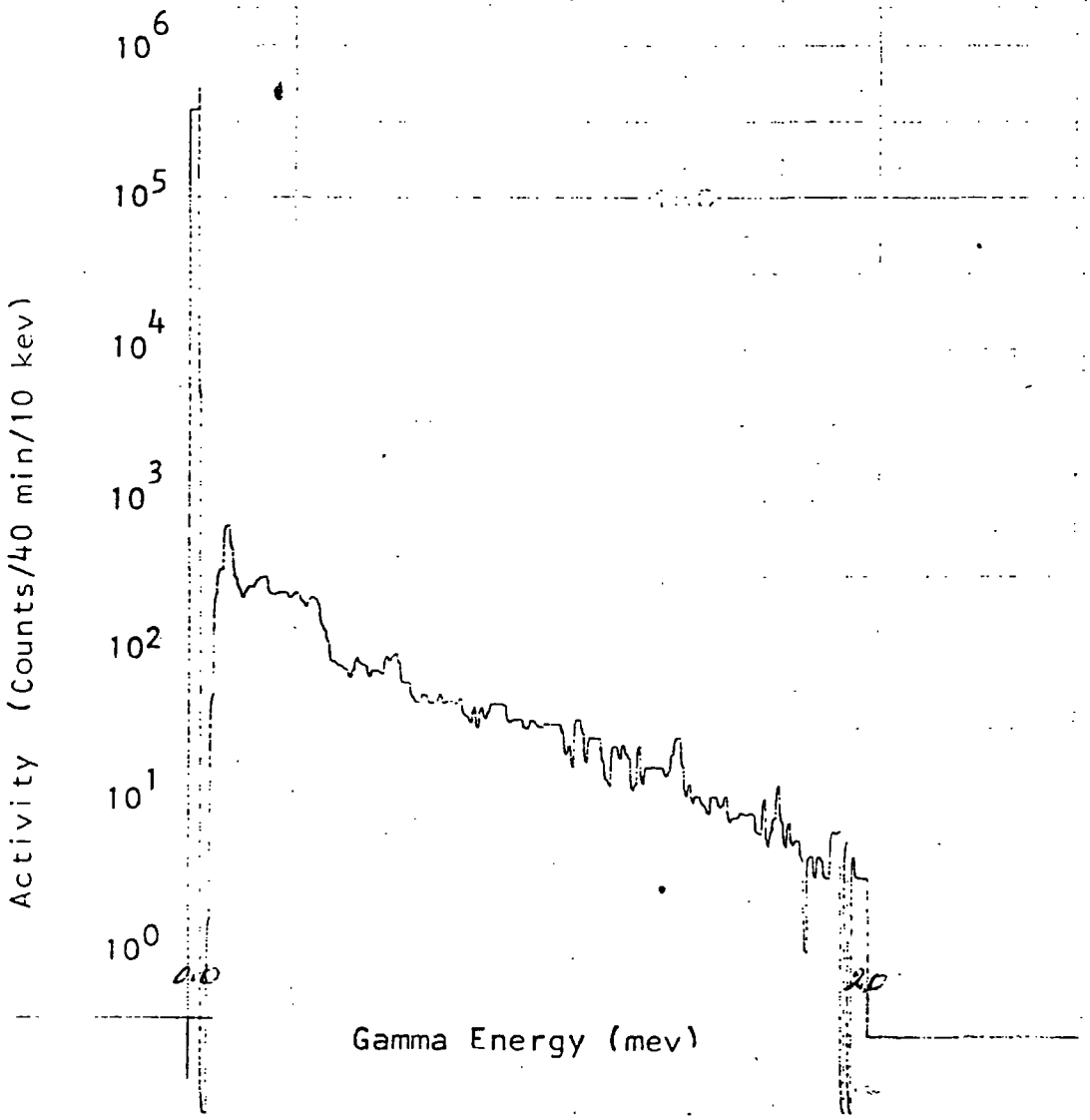
Sooner Dial Company
Clinton, Oklahoma

Wipe No. 4

Live Time: 40 min.

Background not subtracted

Calibration: 10 kev/channel



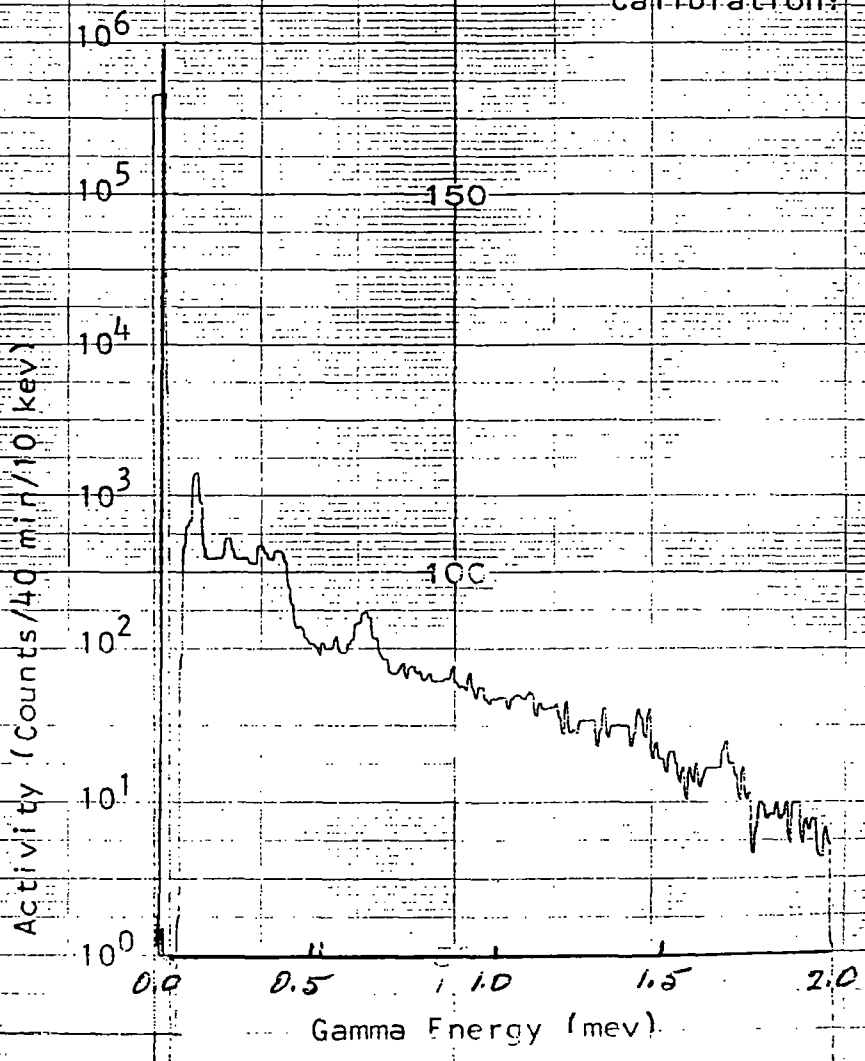
Sooner Dial Company
Clinton, Oklahoma

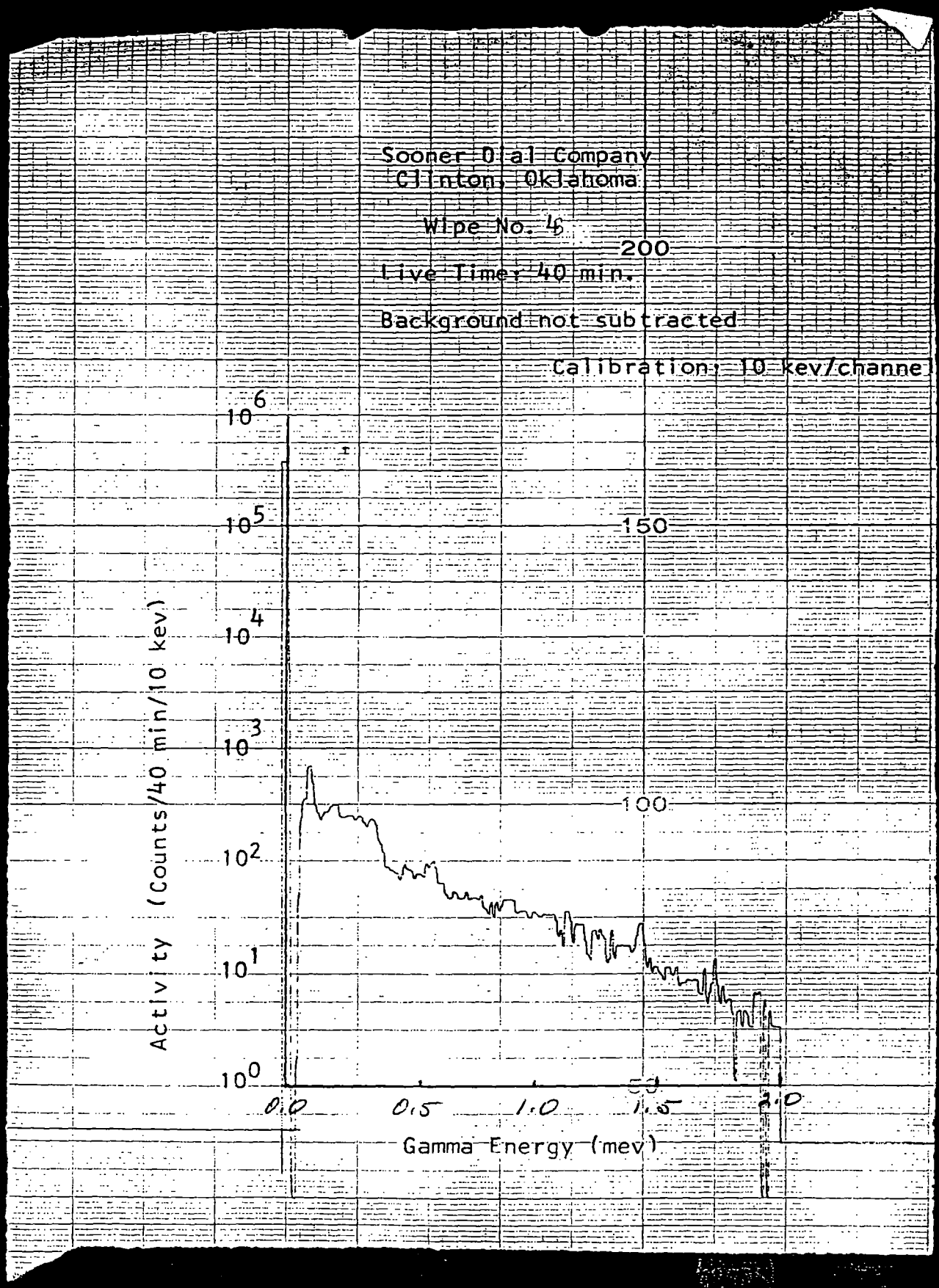
Wipe No. 5

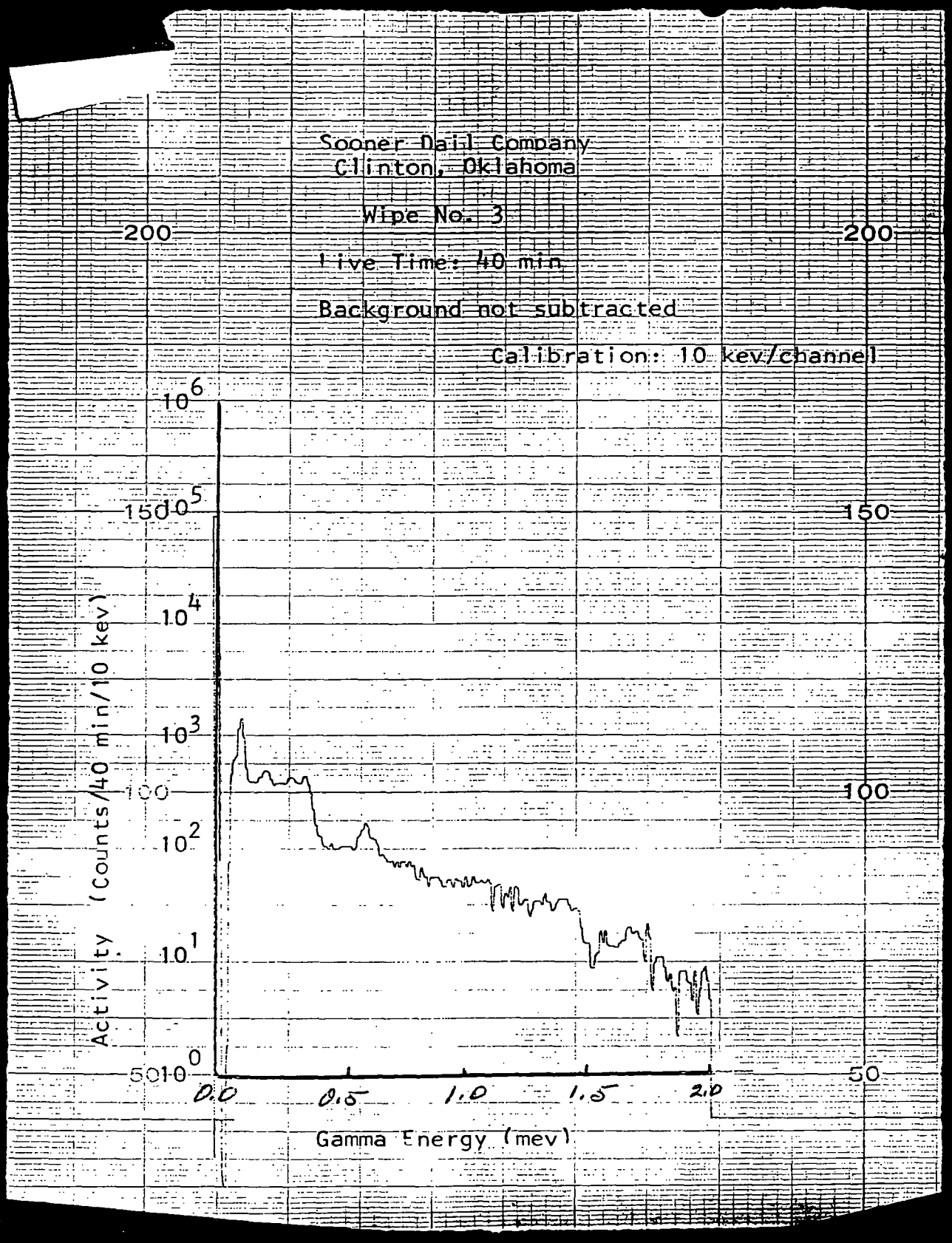
Live Time: 40 min.

Background not subtracted

Calibration: 10 kev/channel




Soomer Coal Company
Clinton, Oklahoma
Wipe No. 4
Live Time: 40 min.
Background not subtracted
Calibration: 10 kev/channel
200
150
100
50
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Activity (Counts/40 min/10 kev)
0.0
0.5
1.0
1.5
2.0
Gamma Energy (mev)


Sooner Nail Company
Clinton, Oklahoma
Wipe No. 3
Live Time: 40 min
Background not subtracted
Calibration: 10 kev/channel
200
150
100
50
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Activity (Counts/40 min/10 kev)
0.0
0.5
1.0
1.5
2.0
Gamma Energy (mev)

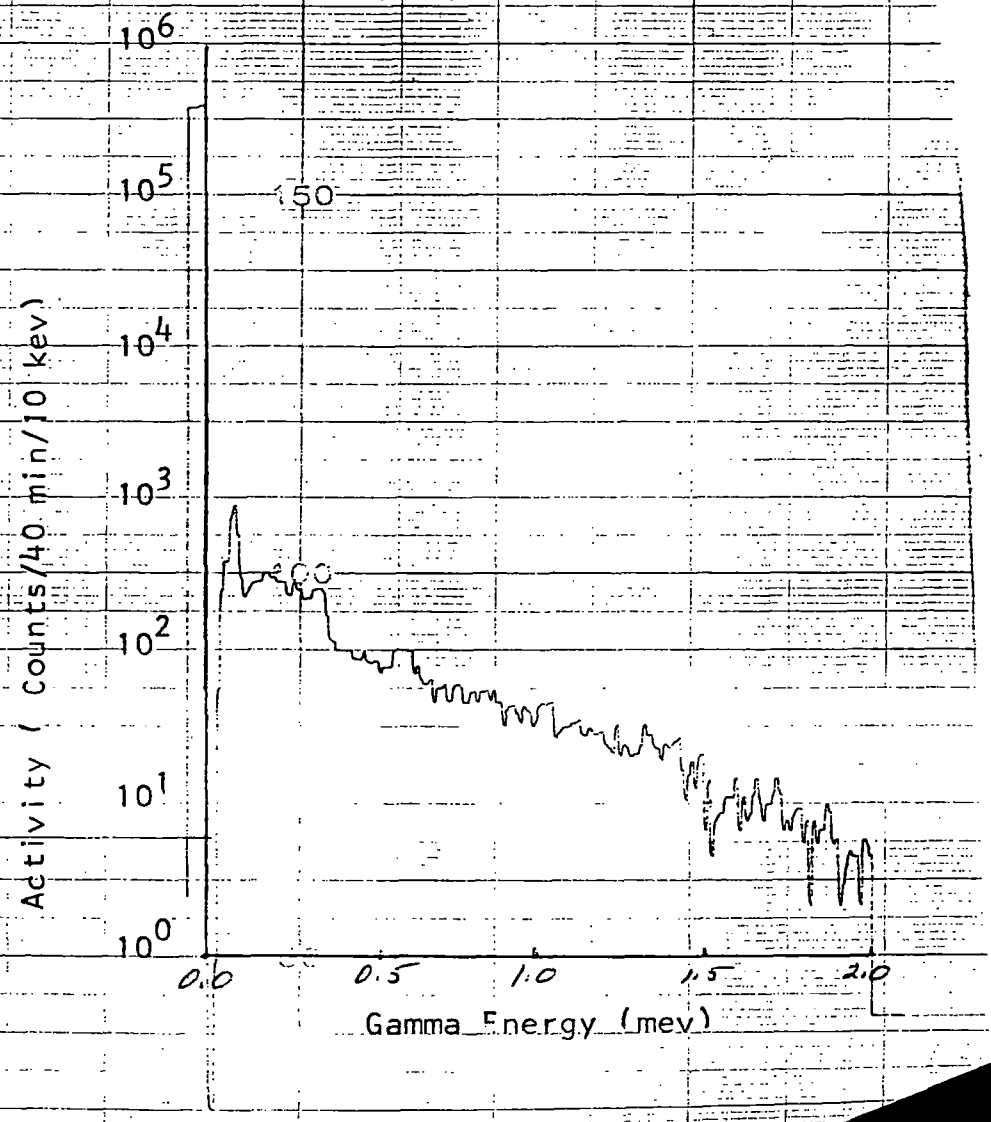
Sooner Dial Company
Clinton, Oklahoma

Wipe No. 2

Live Time: 40 min

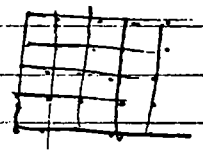
Background not subtracted

Calibration: 10 kev/c



602-944-3060

Johnston Vs USA. Fed Court Wichita



Safety Light Corp
1300 4150 A Old Herrick Rd.
2600 Bloomsburg, Pa.

Drums $40.45
Transp 2.80
Burial 12.50

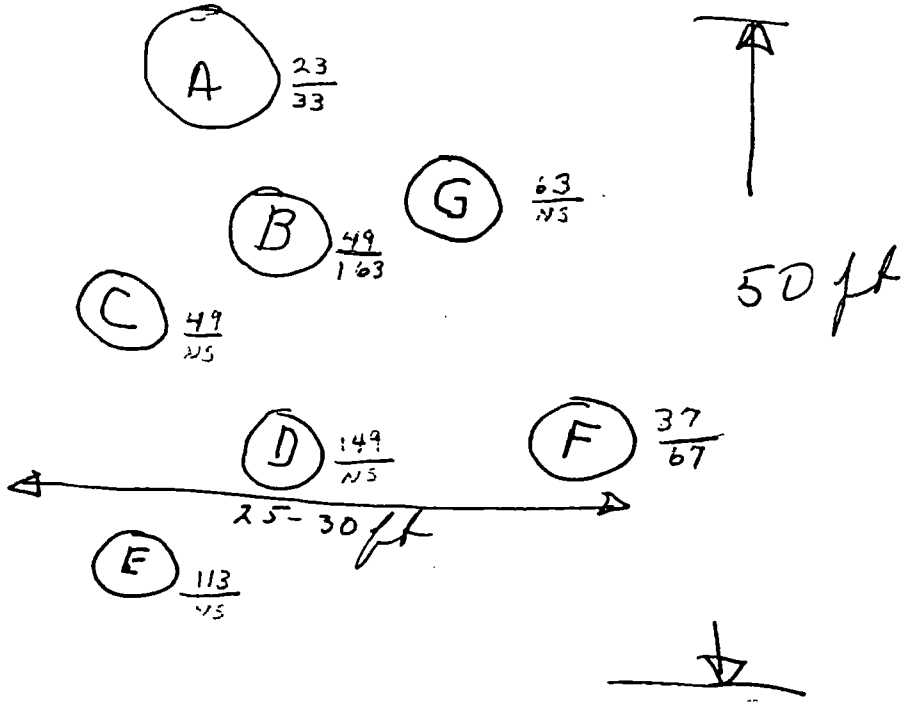
$\frac{100 \text{ pCi/gm}}{0.1 \text{ pCi/gm}} = 1000$

2.3 gm/~~ft³~~ cc

2700 #/gal

900 #/ft

225 #/ft min



cove 75 ± 09

$\frac{1\,5900 \text{ ft}^3}{.5}$

eff 31500

1500 ft³

.73 Acres

410

1060 ft³

40 yd.