

THE ORGAN-BUILDER

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PREFACE.

SECTION ONE.

Brief history of the organ.

TAKING the word, *organ*, in its earliest meaning, we find that it goes back to the original invention of the arts. In the remotest times, the name, *organ*, was given to any tool or instrument whatever. Later, its use was limited to musical instruments in general. In more recent times, the term indicated wind instruments; and finally, it designated only a set of pipes bound together, whose more or less diverse combinations produced a more or less pleasing concert of sounds, according to the artist's ability.

A few authors have used the term, *organ*, to designate a group of persons singing together, and others, to indicate a consort of flute-players. The commentators of Holy Scripture limit the term to wind instruments. When it is written in Genesis that Jubal, one of the sons of Lamech, was "father of all such as handle the harp and organ", the commentators believe that *harp* represents all stringed instruments and *organ*, all wind instruments.¹ The Hebrew word rendered in the Vulgate by *organum* corresponds to the Chaldaean *abuba*², and his term bears an obvious resemblance to the "ambubaiarum collegia" by which Horace designates flute- or organ-players from Syria.

The Latin word, *organum*, is very often encountered in Holy Scripture. Saintly Job, describing the prosperity of the wicked, says that they "take the timbrel and harp, and rejoice at the sound of the organ."³ Then describing his misfortunes, he says that "my organ [is turned] into the voice of them that weep."⁴ The organ is also mentioned in Psalm CL, among the instruments used to praise the Lord,⁵ but these were different instruments from our organs. The expression used by the author of Psalm CXXXVII to portray the sadness of the children of Israel during the Babylonian captivity, proves that theirs were very light, portable instruments: "we hanged our instruments upon the willows."⁶

Dom Calmet, in his monograph on this topic, thinks that the organ mentioned in Scripture was a set of pipes, stopped at their lower ends and joined together, played by sliding over the lower lip. This is the instrument which Lucretius suggests when he says, *unco saepe labro colamus percurrit hiantis*: "he slides open pipes back and forth at his lip".⁷ The organ in this sense was well known to secular writers, especially poets. Virgil attributes this invention to the god Pan; and others, to another origin. These diverse opinions, says Dom Calmet, arise only from the ignorance of these authors concerning the true history and antiquity of these instruments, which the Greeks seem to have borrowed from peoples farther East. This organ-like in-

¹Critical Commentary to Genesis, 4:21.

²Dom Calmet, "Dissertation on Musical Instruments", in *Lit-
erary Commentary to the Psalms*, vol. II, p. 87.

³Job, 21:12.

⁴Job, 10:11.

⁵Psalms, 150:4.

⁶Psalms, 137:2.

⁷Lucretius, Bk. IV.

Dom Bedoes

(1709-1779)

By Blair Batty

Forward

I am a retired organbuilder. This PDF is some of my personal notes about French organbuilding, which I gathered over my lifetime. It was intended for my own education and interest; I never intended to publish. As such, I freely plagiarized and copied anything interesting, and often failed to keep track of sources. I am not an academic; this is a hobby that got away out-of-hand...

It also contains information sent to me by friends, as well as information from various books and publications. Much of it I wrote down decades ago.

I've ignored history, which is well covered by others. I've also ignored construction and mechanism, which at the time I felt we were already doing better. Mostly, I was interested in how the stoplist and pipework evolved over the centuries; and how the pipework was constructed and voiced. I've documented pipe measurements, which is interesting to organbuilders.

I've only seen a few Andreas Silbermann organs while visiting the Alsace region, and that was four decades ago, so my direct experience of French organs is limited. However, I did spend some time looking at the scaling method of both Dom Bedos and Cavaille-Coll.

I apologise for the messiness of my notes. Many were made decades ago and time and my arthritis preclude redoing it. I'm to blame for the typing and design; Microsoft Word is truly cryptic.

If I've used your photo or material, please contact me and I'll either acknowledge you, or remove it; however you wish. Do contact me, if you have any comments, corrections, sources or questions. I won't be offended...

There are a lot of pipe scales shown here. If scaling is new to you, you could read my Introduction to Pipe Scales, found on my website: BlairBatty.ca.

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by Dom Bedoes*

Dom Bédos

François-Lamathe Dom Bédos de Celles de Salelles (1709-1779) was a Benedictine monk, organbuilder and author of the treatise *L'art du facteur d'orgues*, 1766-78. This book gives a wealth of information about every detail of building the French organ of the eighteenth century and is a necessary reference for any serious organbuilder. The best edition is Charles Ferguson's translation *The Organ-Builder* (Raleigh, North Carolina, Sunbury Press, 1977). It is a huge book, because all the plates and drawings were reproduced full size. Bédos showed his pipe measurements as full-size graphs, so reproduction accuracy was important.

He provides useful information about every detail of organbuilding: Casework design, stoplists, pipemaking, bellows and windchest making, pipe scale layout, gluing. As a recognized organbuilder, he was called upon to carry out repairs and appraise and advise other organbuilders across France.

Bedos Scales

The following scales are from the Mahrenholz book, who copied it from Bédos' book. Bédos organs were one semitone flat, A=415 Hz, but no corrections have been applied here. All are inside diameters, in millimeters.

	C1	C13	C25	C37	C49
Principal 32'	503.8	261.6	140.3	79.9	49.6
Principal 16'	306.8	159.6	86	49.3	30.8
Principal 8'	155.7	84.1	48.3	30.4	21.4
Oktave 4'	94.7	50.2	28	16.9	11.3
Oktave 2'	57.3	31.4	18.3	11.7	8.5
Plein Jeu 4'	79.7	45.9	25	14.6	9.4, c61-6.8
Plein Jeu 4'	40.6	22	12.6	8	5.6

(Flute de Pedal) wood	C1	C13	C25	C37	C49
Offenbass 32'	498.9	267.2	151.4	93.5	64.5
Offenbass 16'	323.3	176.5	103.1	66.5	57.3
Offenbass 8'	190.9	108.7	67.6	57.3	
Offenbass 4'	108.3	85.7	66.3	37.2	22.7

Wood	C1	C13	C25	C37	C49
Gedackt 32'	437.8	232.7	130.2	78.9	
Gedackt 16'	224	128.1	80.2		
Gedackt 8'	140	81.5			

Metal pipes	C1	C13	C25	C37	C49
Gedackt 4' (<i>wide</i>)		84.6	48.8	30.9	22
Rohrflote 4' (<i>wide</i>)		84.6	48.8	30.9	22
Gedackt 4' (<i>narrow</i>)		73.3	42.7	27.4	19.7
Rohrflote 4' (<i>narrow</i>)		73.3	42.7	27.4	19.7
Flote 4' (Basse de Viole)	94.7	50.2	28	16.9	11.3

Cylindrical	C1	C13	C25	C37	C49
Terz 3-1/5	94.7	50.2	28	16.9	11.3
Nasat 2-2/3" (<i>wide</i>)	85.7	46.9	27.6	17.9	13
Nasat 2-2/3' (<i>narrow</i>)	71.6	39.7	23.8	15.8	11.8

Tapered	C1	C13	C25	C37	C49
Nasat 3' (<i>wide</i>)	93.6	50.9	29.6	18.9	13.5
Top of pipe	62.5	32.9	18.1	10.6	6.9
Nasat 3' (<i>narrow</i>)	71.6	39.4	23.4	15.3	11.3
Top of pipe	48.1	25.3	13.9	8.2	5.4

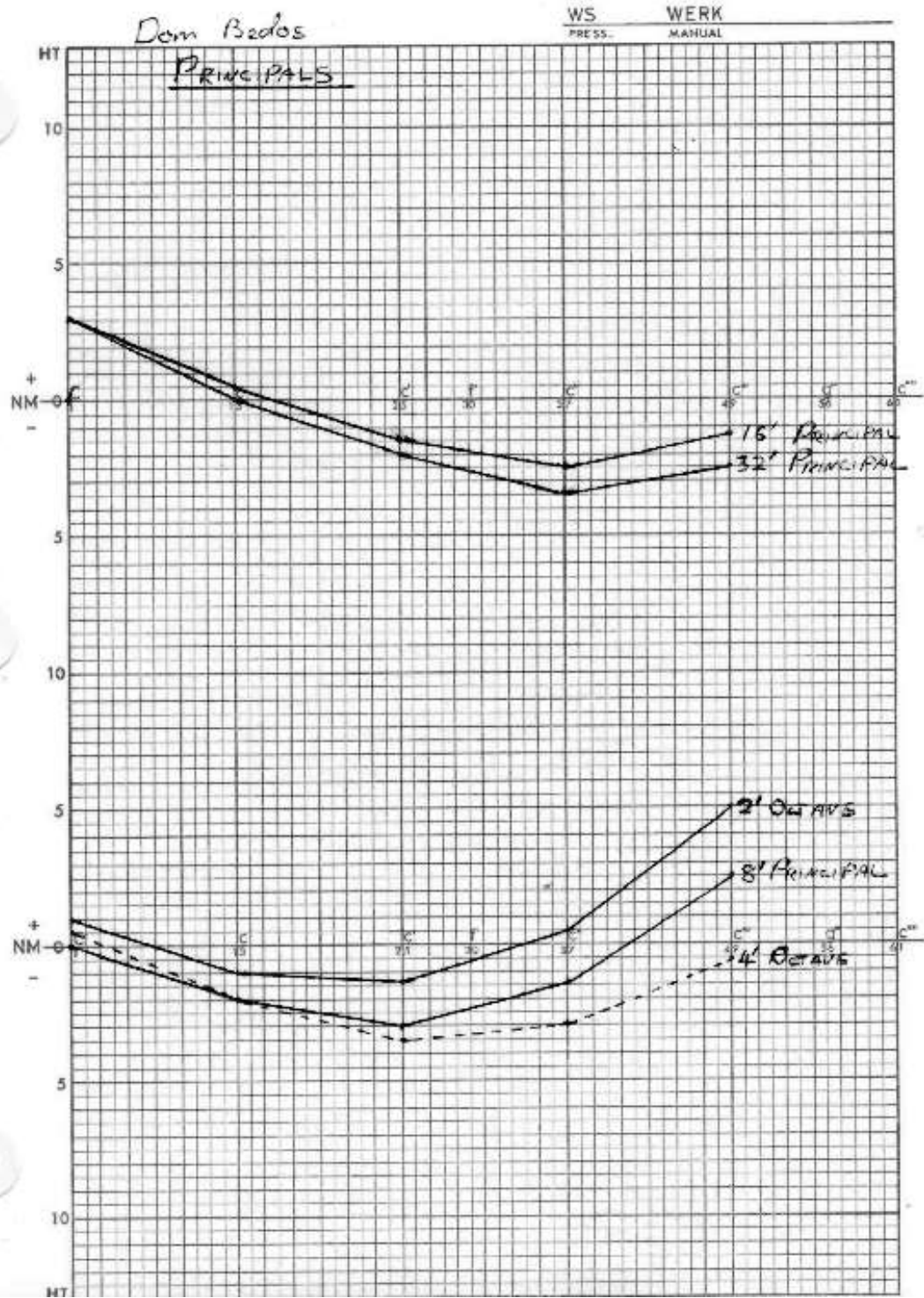
	C1	C13	C25	C37	C49
Quarte 2' Wide	72.2	39.6	23.5	15.3	11.3
Quarte 2' Narrow	66.2	38.1	24.1	17	13.5

	C1	C13	C25	C37	C49
Terz 1-3/5' (<i>wide</i>)	59.2	33.1	20	13.4	10.2
Terz 1-3.5' (<i>narrow</i>)	54.1	29.8	17.6	11.5	8.5
Larigot 1-1/3'	47.3	27.2	17.1	12.1	9.6

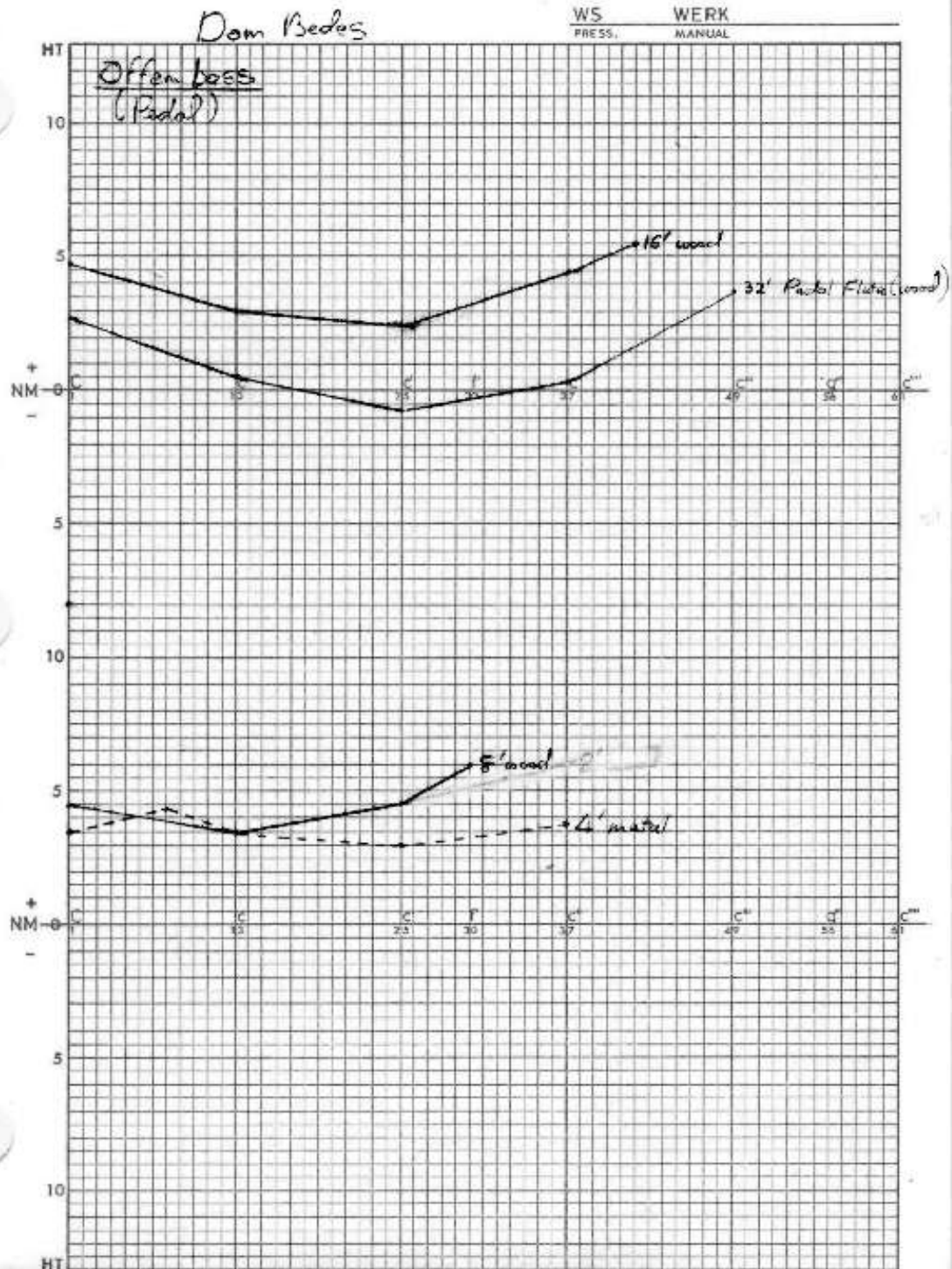
Grand Cornet			C25	C37	C49
8'			46.8	29.9	21.4
4'			39.5	25.2	18.1
2-2/3'			33.8	22.9	17.5
2'			28.8	19.4	14.7
1-3/5'			24.3	16	11.8

Cornet de Recit	C1	F18	C25	C37	C49
8'		68.2	49.3	30.3	20.9
4'		58.7	42	25.3	16.9
2-2/3'		48.5	35.4	22.3	15.8
2'		42.9	31.1	19.4	13.5
1-3/5'		37.2	26.8	16.5	11,3

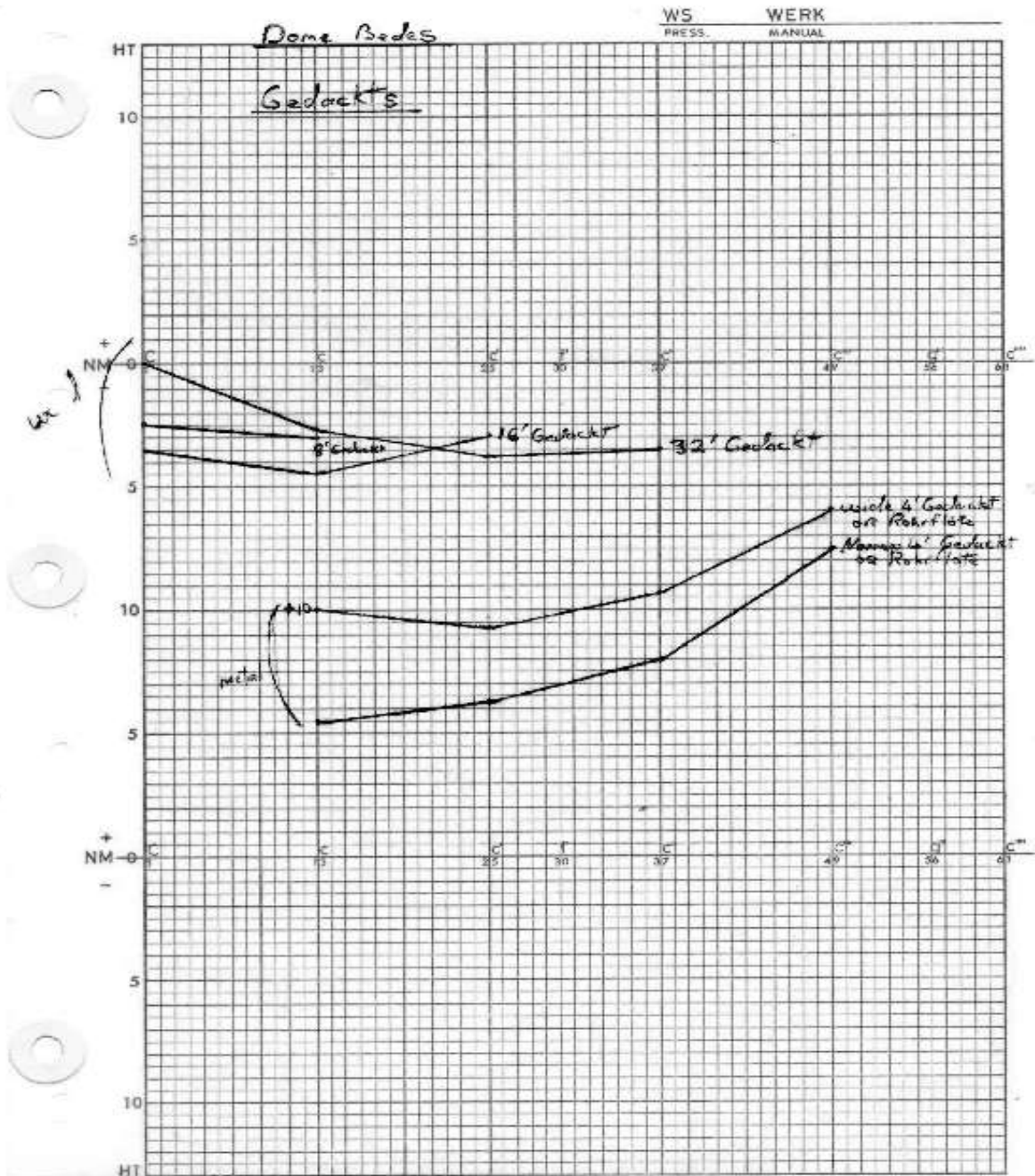
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Offen Bass



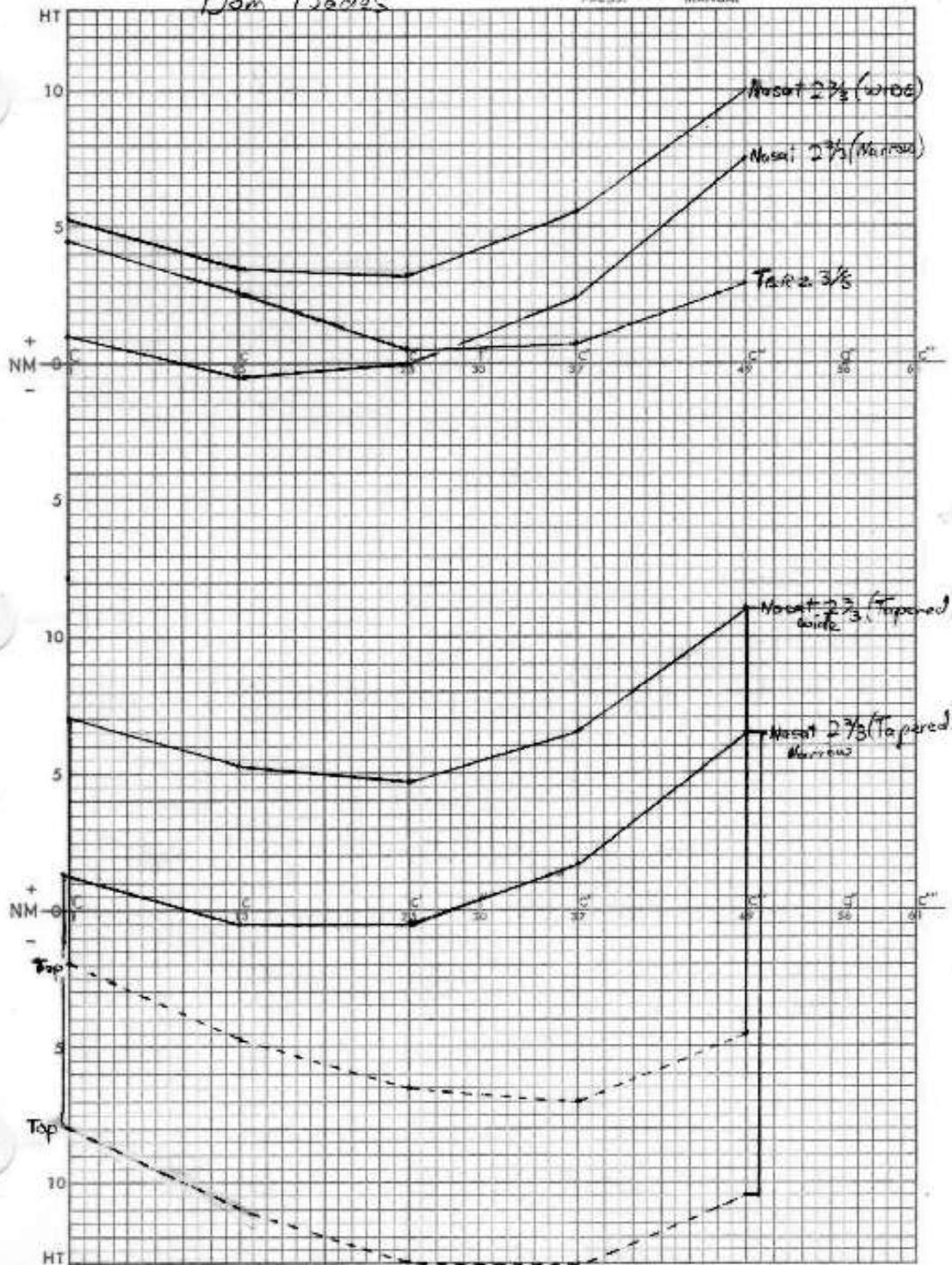
Bourdon

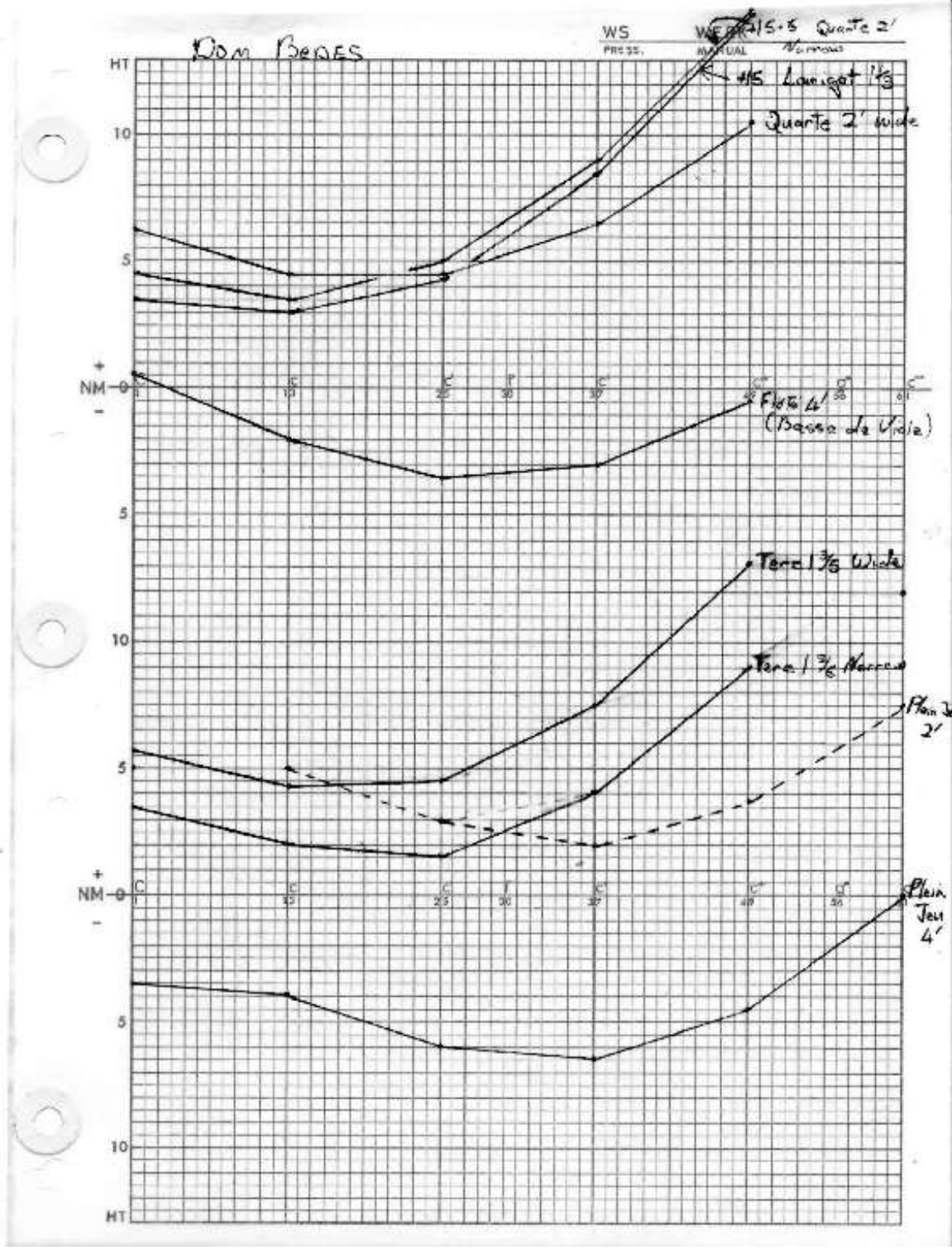


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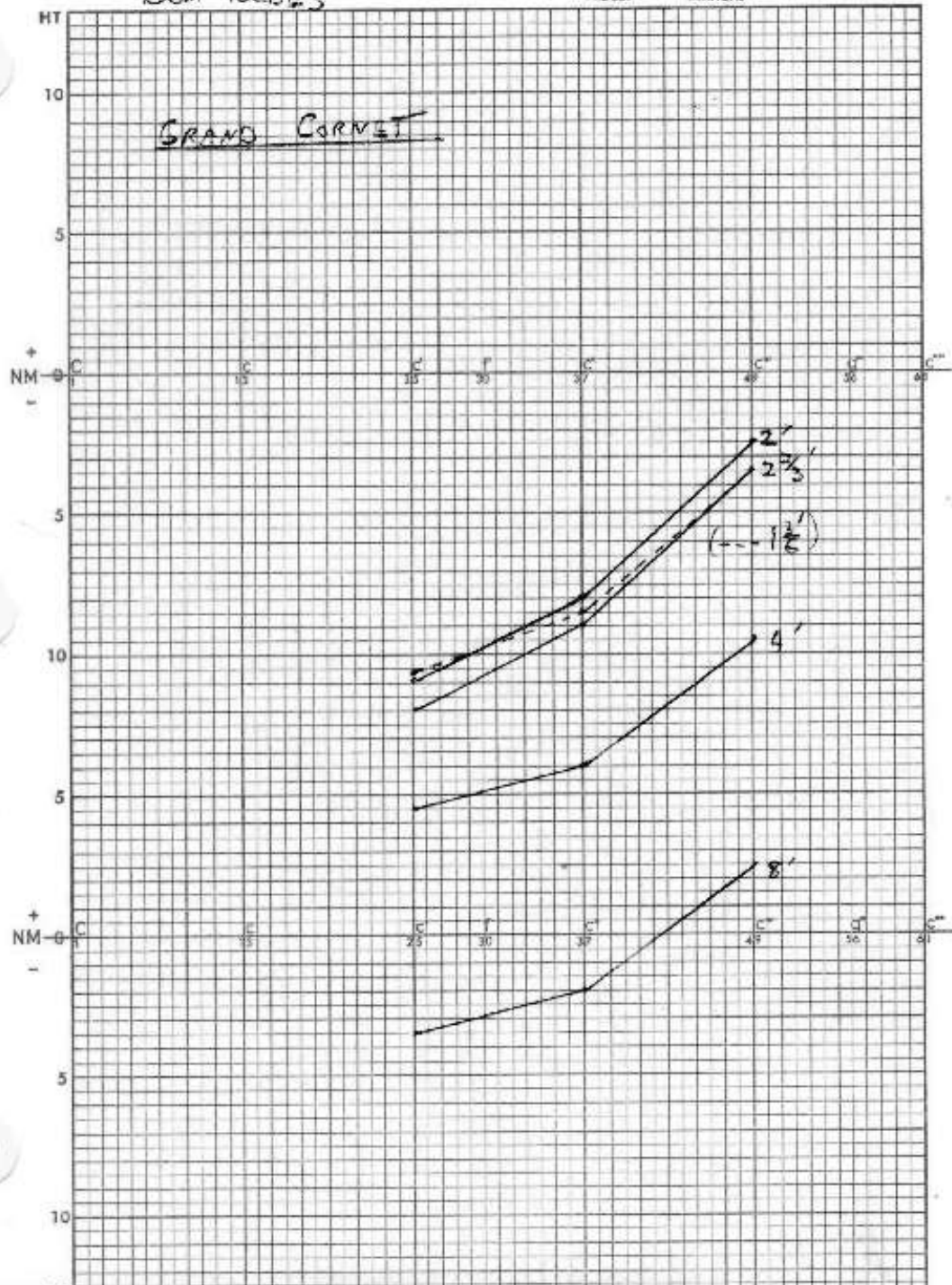




Dom Berge

WS
PRESS.

WERK
MANUAL



Dom Beres

WS WERK
PRESS. MANUAL

