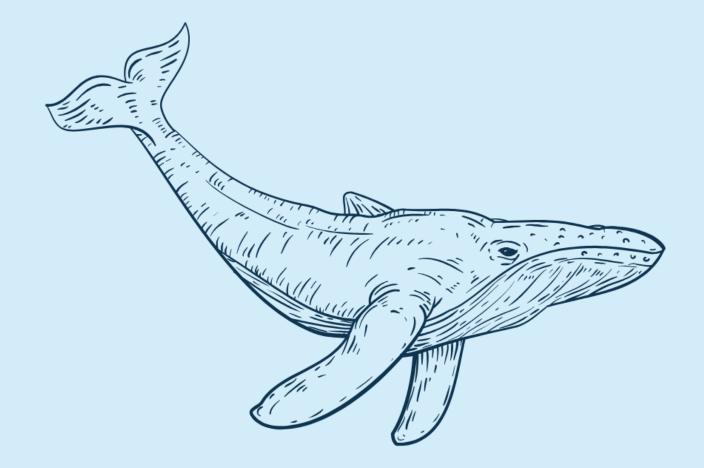
## SOUNDING WHALES

**Archival Recording Project** 

Abigail Sanders, Nuremberg University of Music Anthrozoology Symposium Eighth Edition 06/11/2025

### S O U N D I N G W H A L E S

V O L U M E I



ABIGAIL SANDERS-FRENCH HORN

WORKS FOR HORN BASED ON HUMPBACK WHALE SONGS FROM THE WATKINS MARINE MAMMAL DATABASE AND 'SONGS OF THE HUMPBACK WHALE' (1970)





## ıllılı Watkins Marine Mammal Sound Database

Search the master tapes database

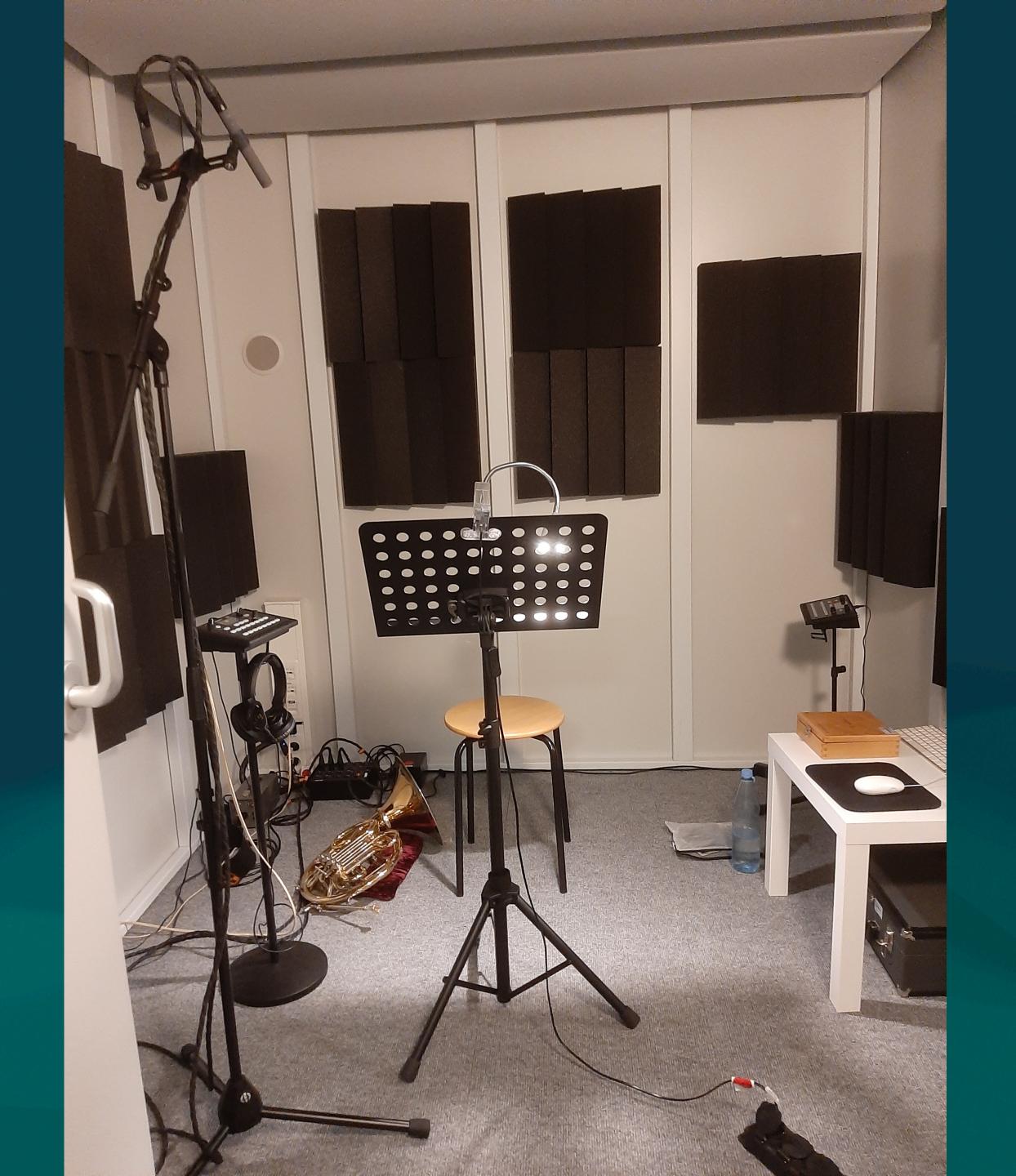
Common name: Scientific name: or Year:

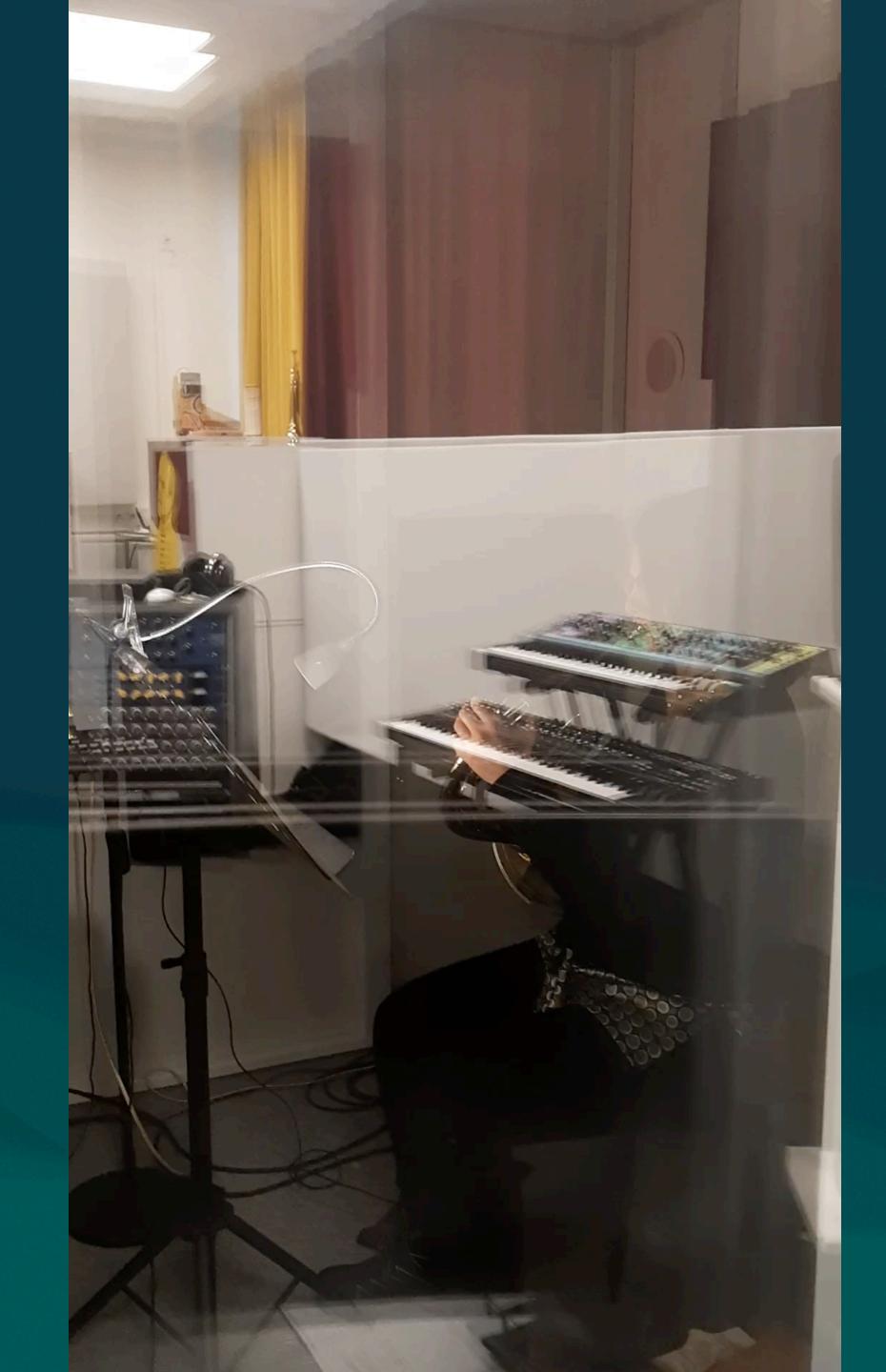
Humpback Whale Megaptera novaeangliae Select

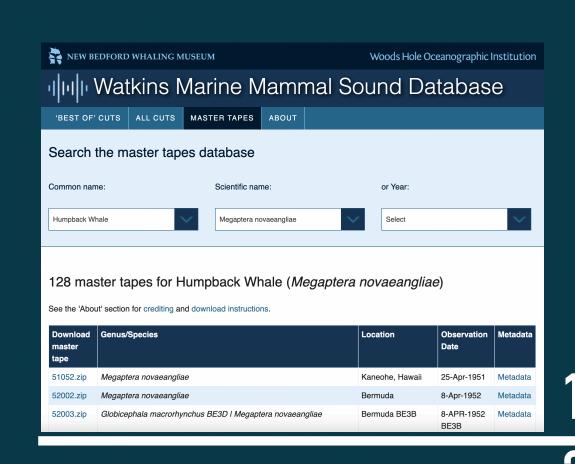
## 128 master tapes for Humpback Whale (Megaptera novaeangliae)

See the 'About' section for crediting and download instructions.

Download master tape	Genus/Species	Location	Observation Date	Metadata
51052.zip	Megaptera novaeangliae	Kaneohe, Hawaii	25-Apr-1951	Metadata
52002.zip	Megaptera novaeangliae	Bermuda	8-Apr-1952	Metadata
52003.zip	Globicephala macrorhynchus BE3D I Megaptera novaeangliae	Bermuda BE3B	8-APR-1952 BE3B	Metadata







4.

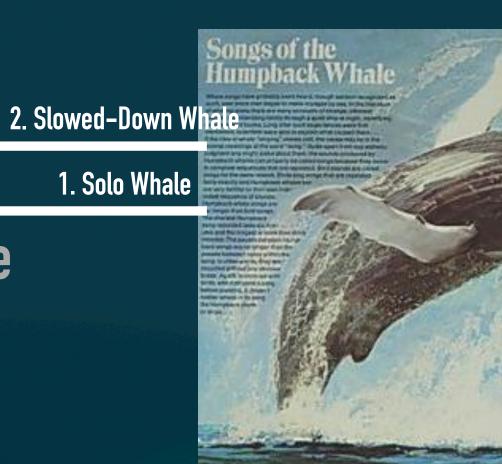
## Track Listing

1951

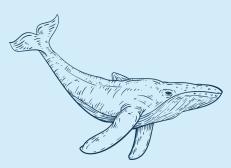
Slowed-Down Humpback Whale

Solo Humpback Whale

Bonus Track: Solo Humpback Whale (Live Recording at the Berliner Dom)



## S O U N D I N G W H A L E S



ABIGAIL SANDERS-FRENCH HORN WORKS FOR HORN BASED ON HUMPBACK WHALE SONGS FROM THE WATKINS MARINE MAMMAL DATABASE AND 'SONGS OF THE HUMPBACK WHALE' (1970)

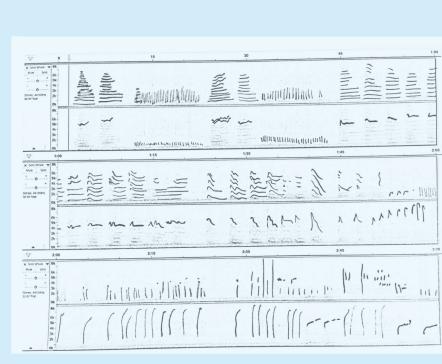
My idea of becoming 'fluent' in whale song on the horn remained dormant for a long time.

I think it was my friend Jennie that first gave me the idea while we were in 'Ecosonics' class. We were both studying horn at the RNCM in Manchester. In this class we improvised based on research on animal communication, led by pioneering baroque flautist Stephen Preston. He would suggest a structure and we would improvise.

What would follow would be intriguing soundscapes beyond imagination, and often we would descend into raucous laughter. Jennie and me, the two horn players in the group were trying to match each others pitch, resulting in a lot of bending and wailing sounds before we broke down. Laughing, Jennie exclaimed 'We sound like whales!'

It was just a passing comment but it was true, the horn is very similar to humpback whale song in the register, timbre and tone.

At the end of 2018 in Berlin I heard the song of the humpback whale while watching  $\boldsymbol{\alpha}$ nature documentary, and that was when it struck me. It was so incredible, and I knew that I  $\,$ could learn play it.



My first tracings of the spectogram of 'Solo Whale' from 'Songs of the Humpback Whale'

The first whale song recording that I found was probably the most famous recording of an animal vocalising. It was the first track of the album 'Songs of the Humpback Whale', produced by bioacoustician Dr Roger Payne.

It is really a masterpiece. As a piece of music it has a huge range, and repeated sections and variations, and it feels very emotional in the way the sounds are expressed.

I took it to the practice room to see if I could learn it aurally, by listening and copying. This was my hope. But the music was so alien to me, I knew I would need a way to analyse it and understand it better before I could play it.

I started to imitate the scientists who first discovered these recordings. US Navy engineer Frank Watlington while listening for Russian submarines in Bermuda at the height of the Cold War, heard sounds that were unusual at the same time every year. Suspecting that they were made by humpback whales, he kept the information a secret to protect the animals from commercial whaling which was pushing the species to extinction. Eventually he was put in touch with Roger Payne and his colleagues Katy Payne and Scott McVay in 1967 and they started to study the extraordinary recordings.

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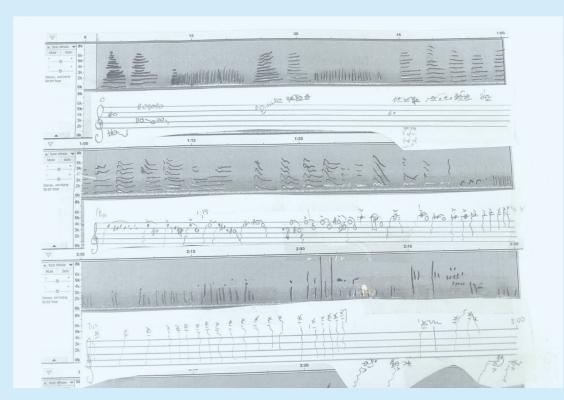
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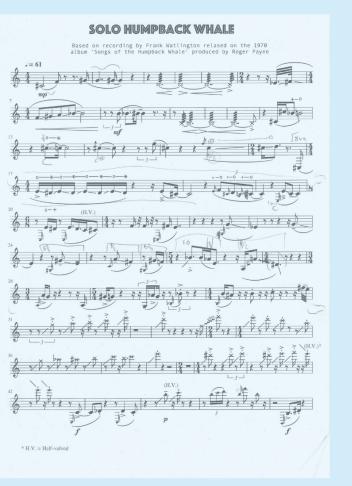
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I produced a simple score, called the piece 'Solo Humpback Whale' and performed it for the first time at the Lichtblick Kino in Kastanienallee, Berlin in April 2019. That was the start of an ongoing project, now called Sounding Whales, where learn how to play whale song on the french horn. I have since found more recordings of whale song, some of them publicly available, and some provided to me by scientists, and made transcriptions and scores out of them and performed them. It is a kind of artistic research and the works for horn are a translation from whale music into human music. Although I usually try to imitate the original recordings exactly, this is an impossible task and I must always adapt to what I can realisitically achieve on my insturment and share with an audience. I use spectograms (visualistions of the sound) as a reference, which show me the fundamental and the harmonics of each sound, but I still select the pitches by ear, so it is also an interpretation of my own, how I hear the music.

In 2023 I joined the innovative Interdisciplinary Music Research Masters Programme at at Nuremburg University of Music, with a focus on Human Animal Studies. This research has given me a deep theoretical underpinning to the project and has helped me to clarify my goals and methods. This E.P. is the result of my Applied Project for the Masters Course.



I combined the spectogram tracings and a rudimnetary notation so that I could remember how to play the song



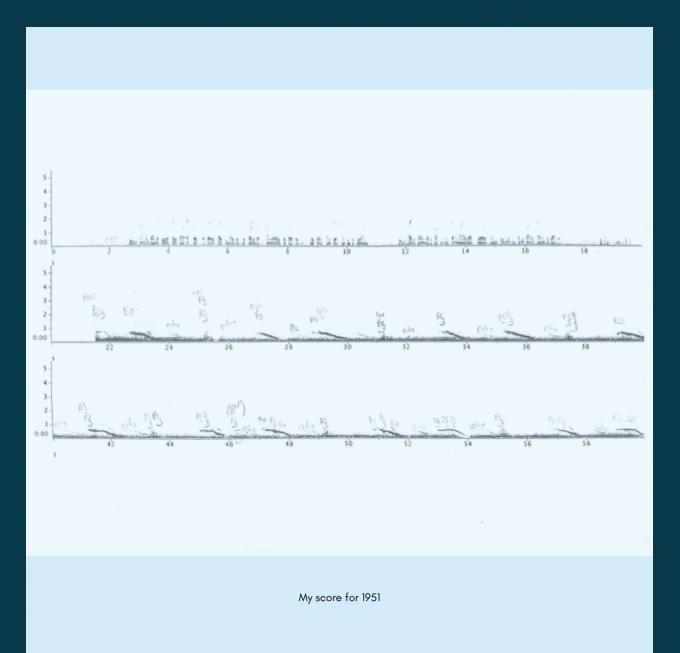
Later on I decided to write out the song in traditional westen-classical notation (with awareness that to do so is a little problematic) and I was surprised how it fitted into different time signatures. This is the score that I have used the most when performing, but I am still developing the score.

1951

I wanted to use this project to come up with a new piece, as well as to record 'Solo Humpback Whale'. I was interested in the music that had led up to that famous recording. Humpback whales tend to sing the same songs as one another, while each individual adds their own variation to it, akin to the oral tradition of folksong. Every four years a cultural revolution occurs, and a new song is started and developed again. I decided to explore the Watkins Marine Mammal Sound Database, and listen to the master tapes of humpback whale song in this extensive and valuable archive.

I listened to many recordings to select which one to work on, but fell in love with the first one that I heard, probably one of the earliest exisiting recordings of a humpback whale, from Kaneohe, Hawaii on the 25<sup>th</sup> April 1951, recorded by William E. Schevill. I was immediately struck by the structure; a lot of high notes repetively answered by low notes, that seemed to be linked together in a kind of counterpoint. It had changing tempo, with often a slow and meditative feel, and sometimes it sounded like two notes were being sung at once. This would create challenges for me to recreate live, but for a recording project this would be no problem.

After trying many different ways to produce a working score, I printed the spectogram and wrote out what valve combinations to play above each sound. Due to time restrictions, we developed a workflow in the recording studio where I listened to different parts on a loop and worked them out by ear in real-time. This was a new way of working. In production we added custom delays to recreate the unpredictable echos that seem to occur underwater.



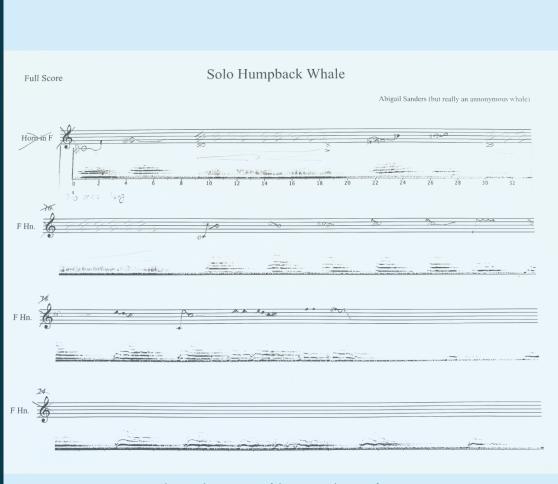
#### SLOWED-DOWN HUMPBACK WHALE

This track went through two iterations, as the original was meant to include some real whale song recordings that had been slowed down, but could not be included due to copyright issues.

One evening I put on the album 'Songs of the Humpback Whale' played along the to the first track for practice, but kept the album running. The second track, called 'Slowed-Down Solo Whale', contains sounds from the first track slowed down. This particular evening I started improvising along to to it and liked what came out, so I decided to record it at Leo Labs for this project.

Usually I prefer not to play over whale song, but let it speak for itself. However in this case, as the original was already transformed, I was happy to add another layer of transformation through the multi-phonics in the low register that create the effect of accompanying chords.

I tried with no success to track down the relevant people for the copyright of 'Slowed-Down Whale', and with time running out, I decided to recreate the sound by slowing down my own recording (Track 3). I didn't try to imitate the original so precisely, I more went for trying to capture the overall feel of the first version. In the end I was happy with the result which does not infringe on any copyright and shows a bit more of my own creativity.



This is my latest version of the score at the time of writing

#### SOLO HUMPBACK WHALE

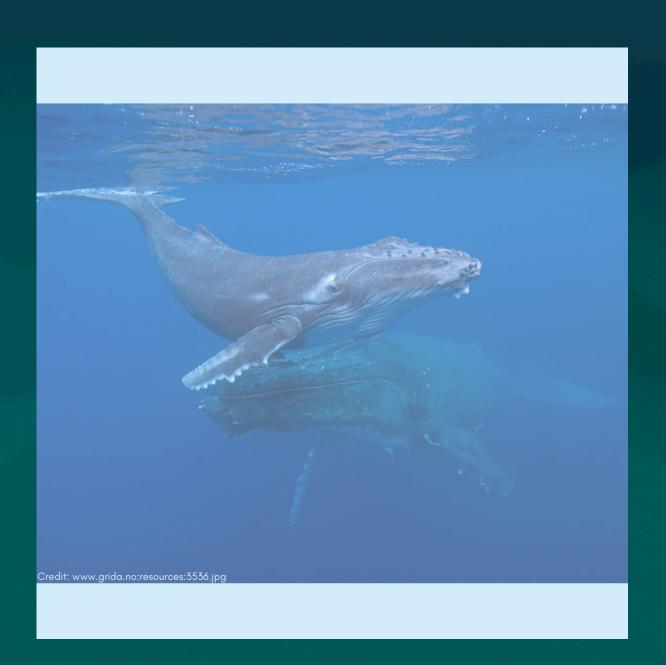
This is the piece that started the whole project and I am so happy to finally have a professional studio recording of it, and a live recording in the Berliner Dom, with its huge, deep acoustic that is so fitting.

Based on 'Solo Whale' from 'Songs of the Humpback Whale', this piece of music is very important in the culture of whales and humans as well as the history of human-animal relations. When Roger Payne and his then wife Katy Payne anylised the recordings of Frank

Watlington and discovered that the whales were singing, they sent the recordings to promintent artists of the time such as the Beatles, Joan Baez, and Bob Dylan. Songs about or including the recording were made by Pete Seeger, Judy Collins, Kate Bush and classcial composer Alan Hovaness. It was pressed onto the Golden Voyager Record and sent into space for extra-terrestials to find. It was distributed to National Geographic's 20.5 million subscribers, and it was integral to the plot of Startrek IV: The Voyage Home, released in

1984. In the same year, commercial whaling was banned in all except 3 countries worldwide. The music saved the species and all whale species, by changing the human consciousness about whales, from resources to be farmed to intelligent individuals with inner emotional lives.

Since then the humpback whale population has recovered to almost pre-whaling numbers, but now they are under threat again from many factors including rising sea temperatures, microplastics in the ocean, ship collosions, ship noise pollution and fishing net entanglement. Perhaps it is time that whale music had a revival.





The people have helped with the Sounding Whales Project are far to numerous to name individually, nonetheless I am grateful to you all.

Specifically for the creation of this E.P. some special thanks are in order to the following people who contributed their time, work and ideas to help me with the finshed product. I want to express a big thank you to Mehves Aydin, Annette Breitsprecher, Yuqingqing Fan, Franz Flemming, Peter Gahn, Nadja Haas, Jan Halen, Alexander Heil, Emma Laín, Louise Oakes, Johannes Otter, Katarina Radaljac, Irène Rayne, Warja Rybakova, Kate Sanders, Julie Sassoon, Merit Ariane Stephanos, Martin Ullrich, Daniel Valeske, Tatjana Varvitsiotis,

Dominik Vogel, Jörg-Martin Wagner, Viktor Weyde, Seren Sarac Yilmaz, Natasha Zaychenko and most importantly the whales.

#### O U N D I N G W H A L E S

V O L U M E I

ABIGAIL SANDERS-FRENCH HORN

1951 SLOWED-DOWN HUMPBACK WHALE SOLO HUMPBACK WHALE BONUS TRACK: SOLO HUMPBACK WHALE (LIVE IN THE BERLINER DOM)

ALL WORKS FOR HORN ARE COMPOSED BY ABIGAIL SANDERS, BASED VERY CLOSELY UPON ORIGINAL HYDROPHONE RECORDINGS OF HUMPBACK WHALE SONG. TRACK 1 WAS BASED ON A RECORDING FROM THE WATKINS MARINE MAMMAL DATABASE, AND TRACKS 2-4 WERE BASED ON THE FIRST TWO TRACKS OF THE ALBUM 'SONGS OF THE HUMPBACK WHALE', PRODUCED BY ROGER PAYNE AND RECORDED BY FRANK WATLINGTON AND ROGER PAYNE

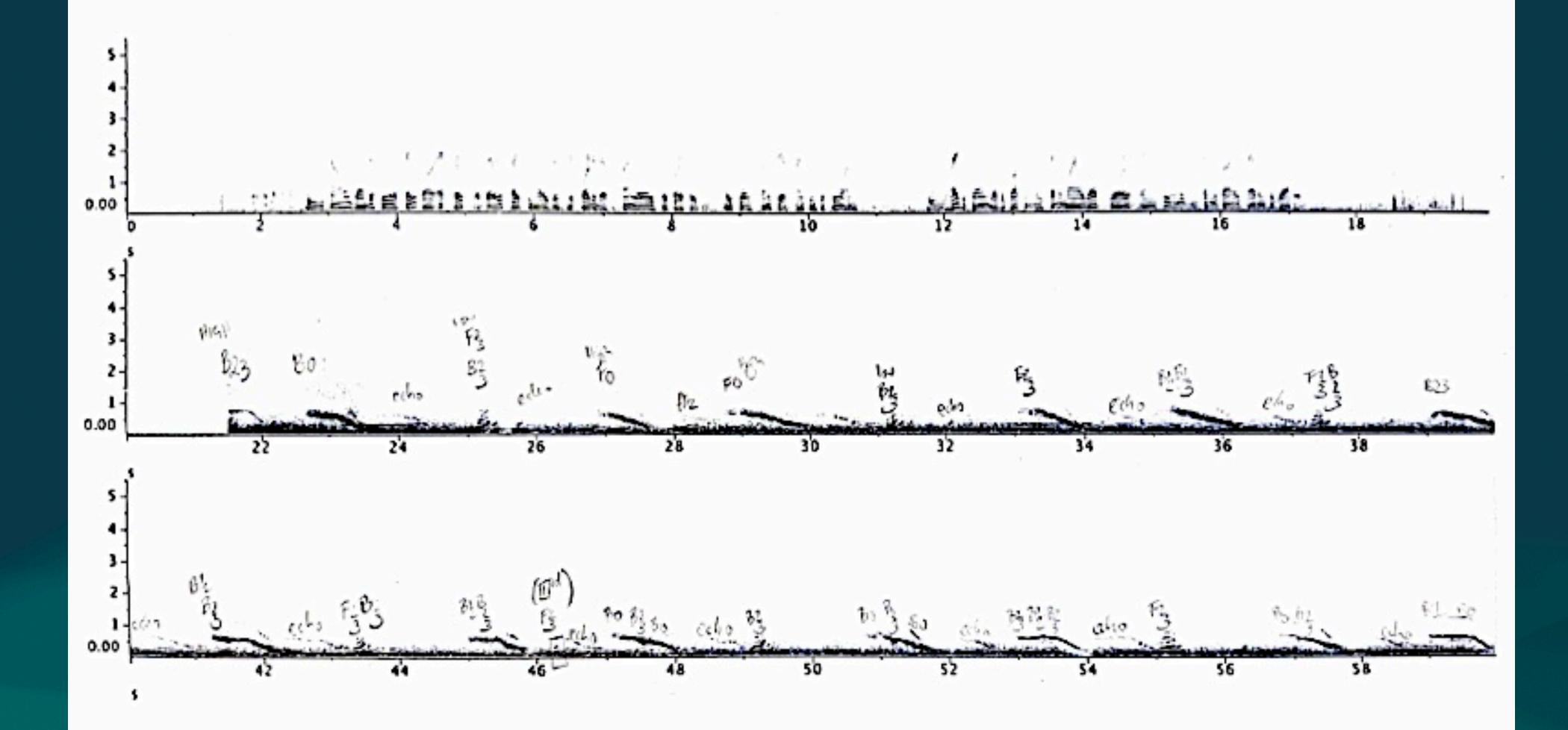
THIS E.P. IS THE FINAL RESULT OF THE APPLIED PROJECT FOR ABIGAIL'S MASTERS IN INTERDISCIPLINARY MUSIC RESEARCH WITH A FOCUS ON HUMAN ANIMAL STUDIES AT NUREMBERG UNIVERSITY OF MUSIC, UNDER THE SUPERVISION OF PROF. DR. MARTIN ULLRICH

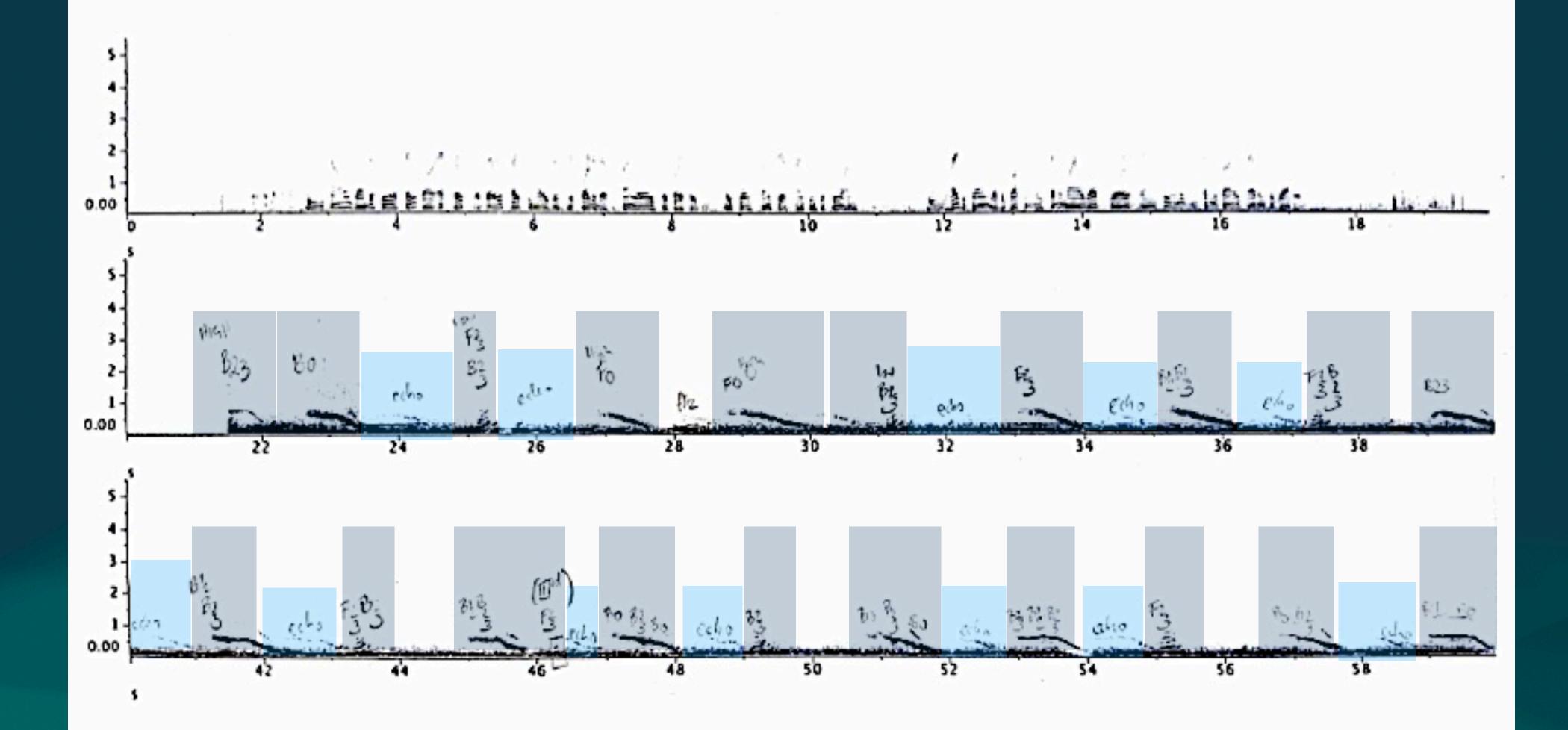
TRACKS 1-3 WERE RECORDED AT THE MIRACL TONSTUDIO AT LEO LABS NUREMBERG
TRACKS 1 AND 3 WERE RECORDED 03.-07.02.2025
TRACK 2 WAS RECORDED 14.-17.04.2025
SOUND ENGINEER: EMMA LAÍN FERNÁNDEZ
STUDIO ASSISTANTS: FRANZ FLEMMING, NATASHA ZAYCHENKO
WITH THANKS TO KATARINA RADALJAC AND DANIEL VALESKE

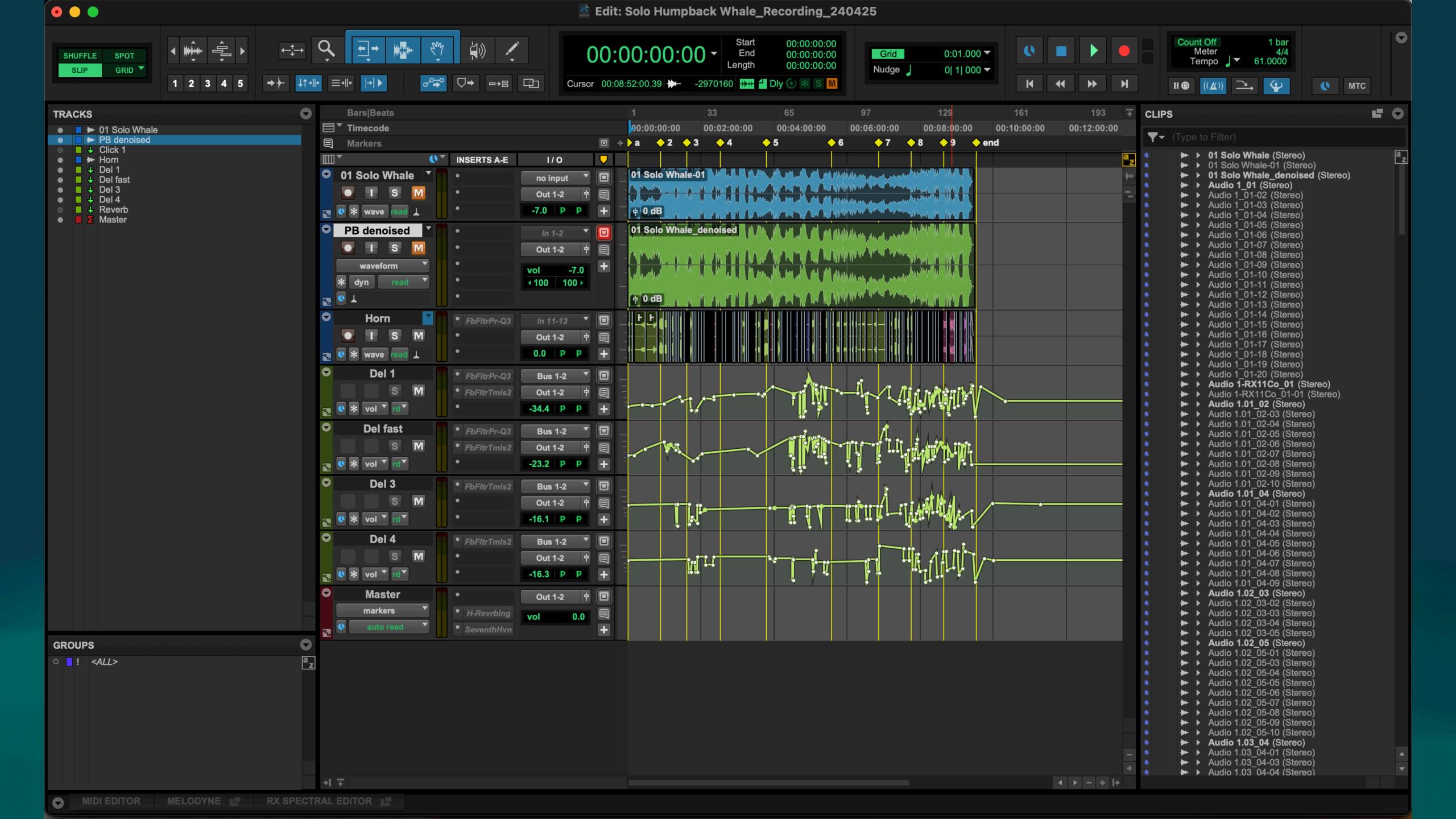
TRACK 4 WAS RECORDED AT THE BERLINER DOM 25.01.2025 WITH THANKS TO ALEXANDER HEIL AND VIKTOR WEYDE

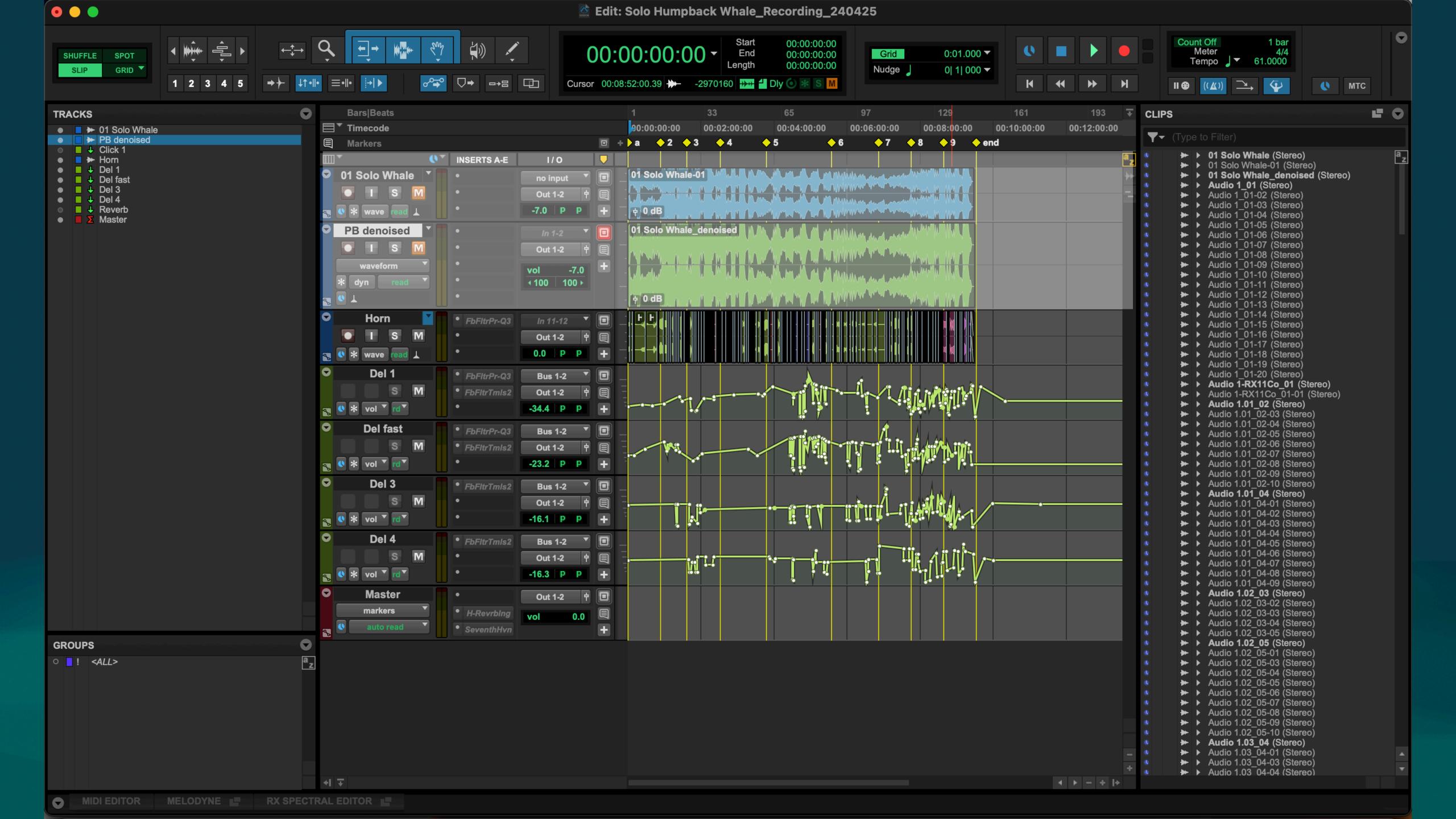
COVER DESIGN BY ABIGAIL SANDERS D-DRAWN HUMPBACK WHALE IMAGE: © CGTERMINAL VIA CANVA.CON

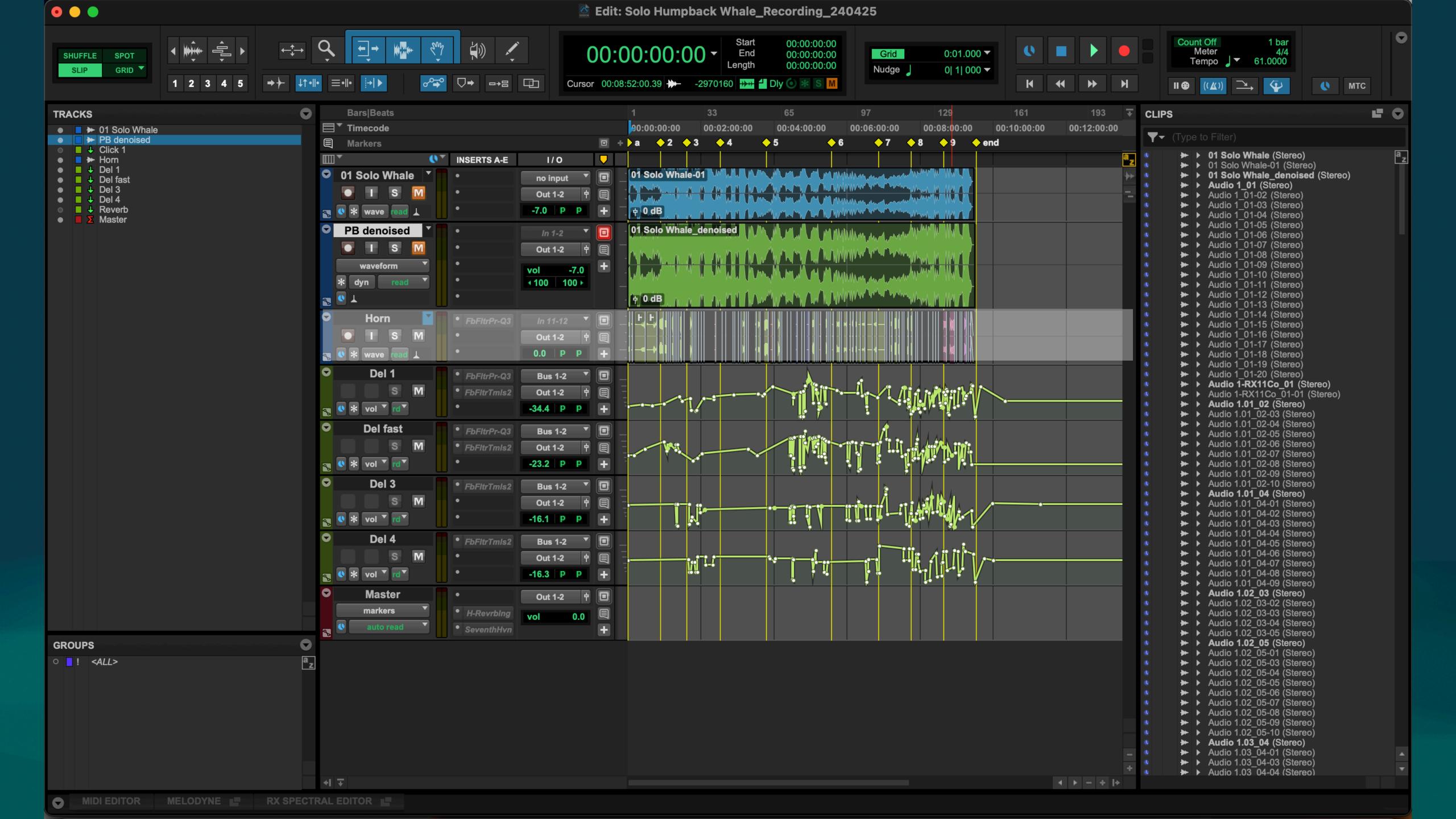
LEOLABS

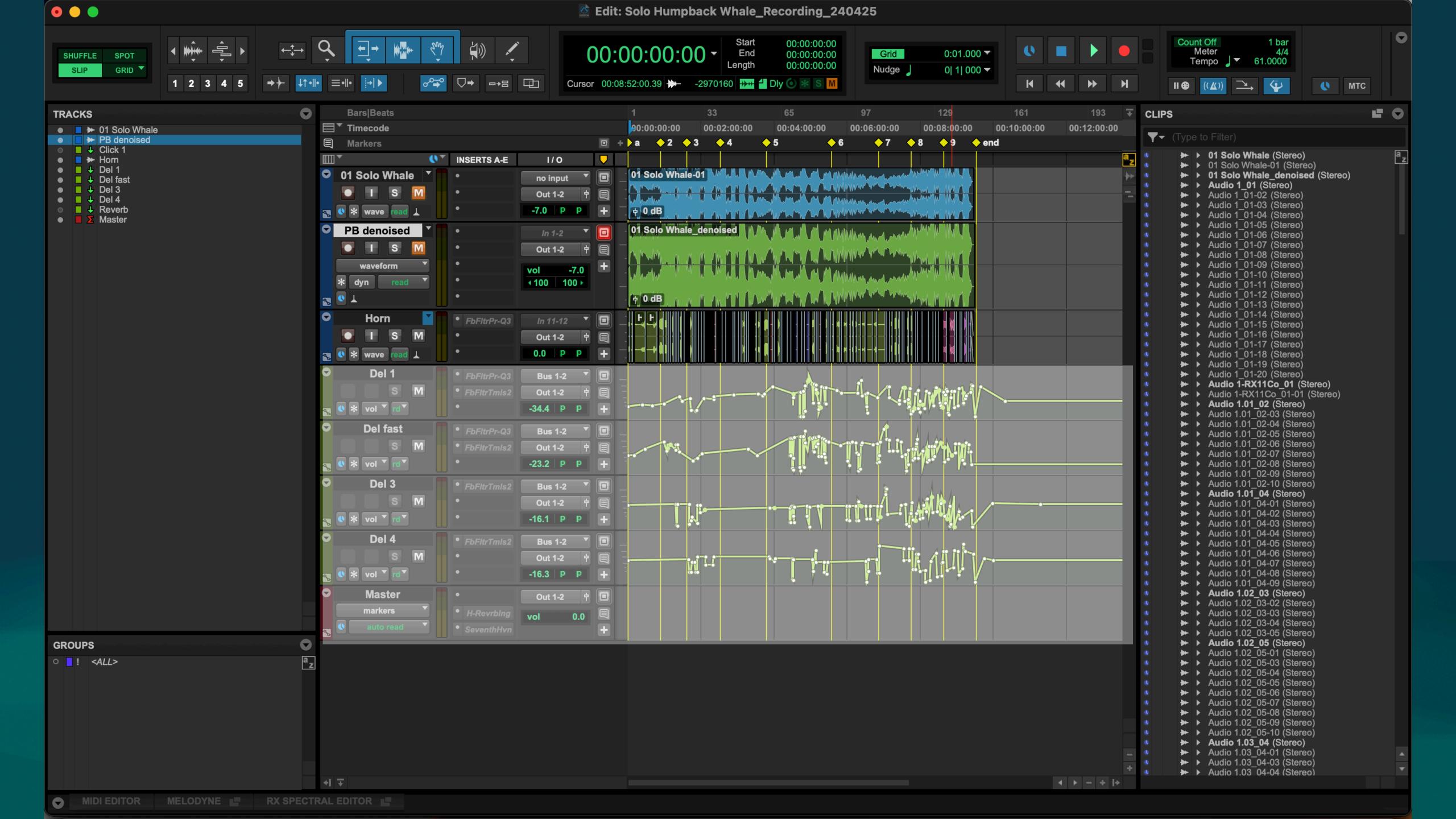


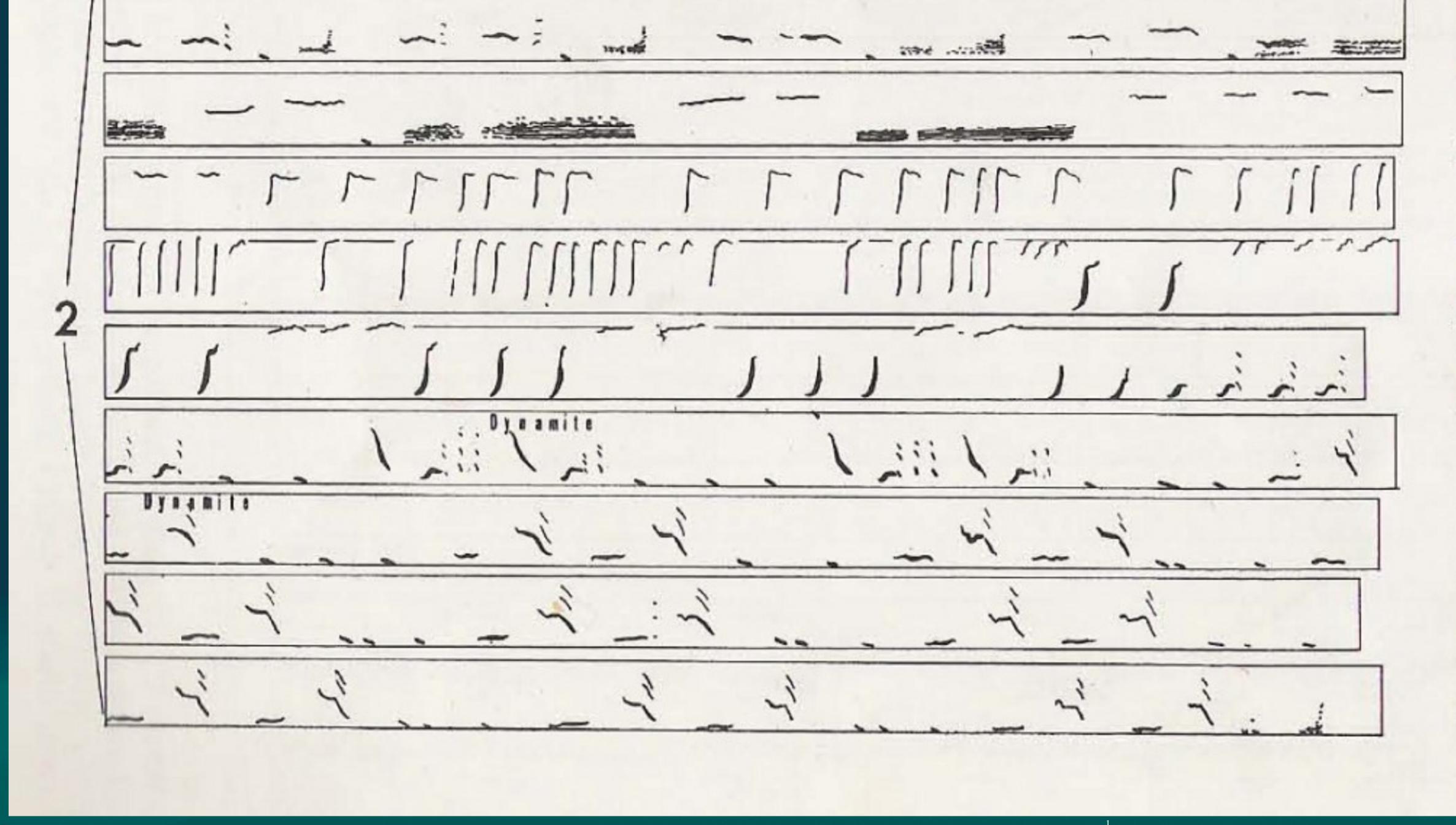




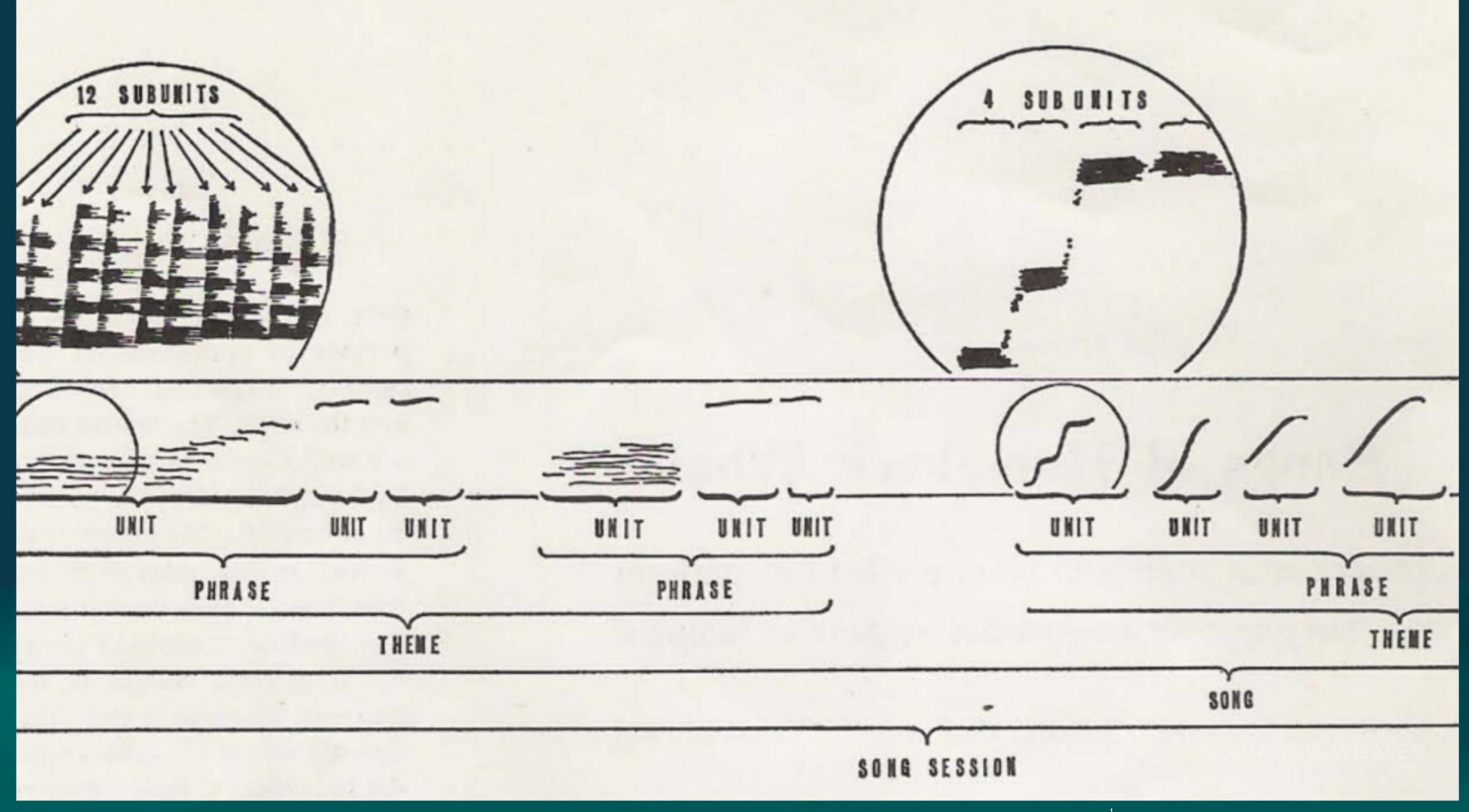






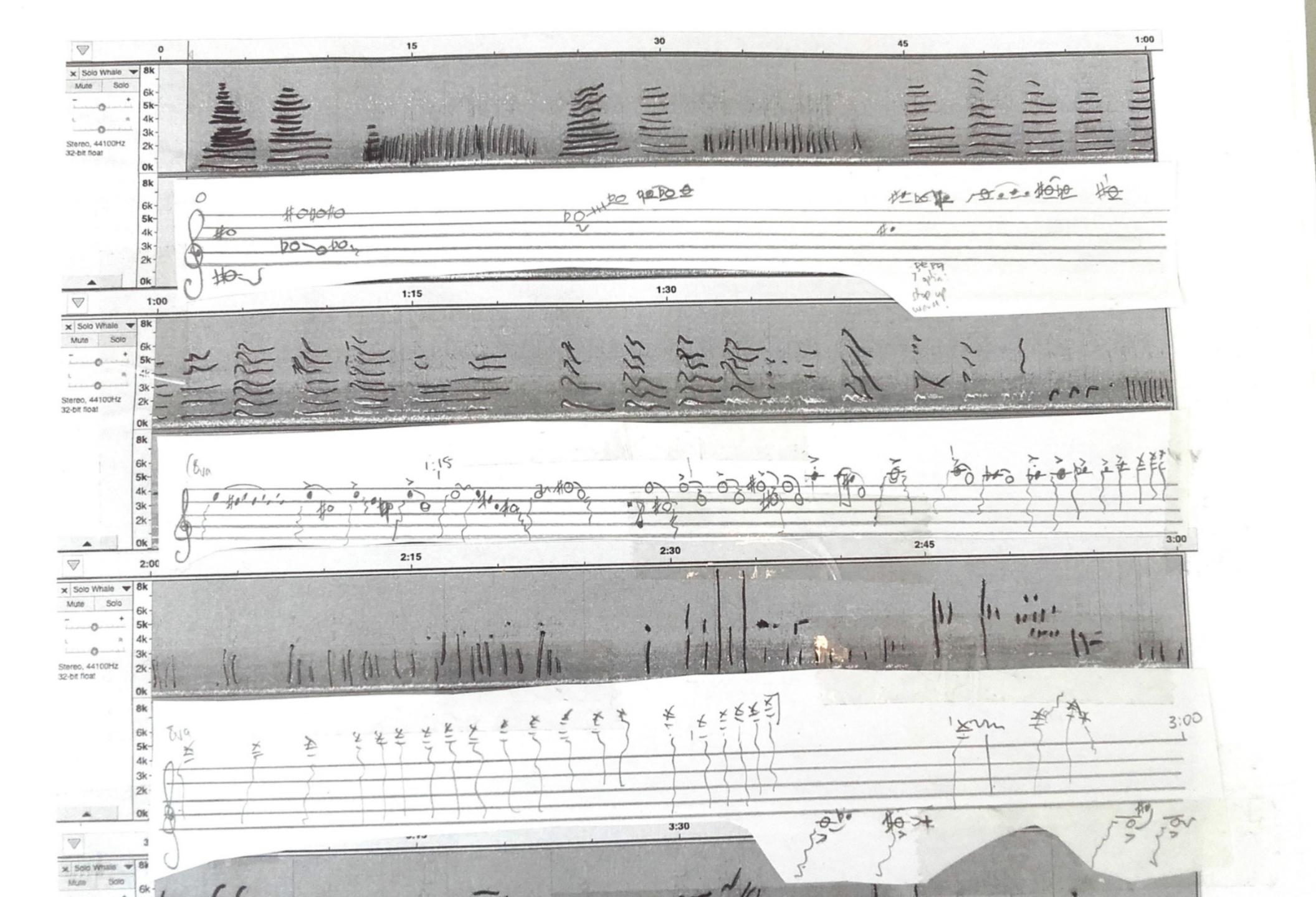


Payne, R. S. & McVay, S. Songs of Humpback Whales. Science 173, 585-597 (1971).



Payne, R. S. & McVay, S. Songs of Humpback Whales. Science 173, 585-597 (1971).





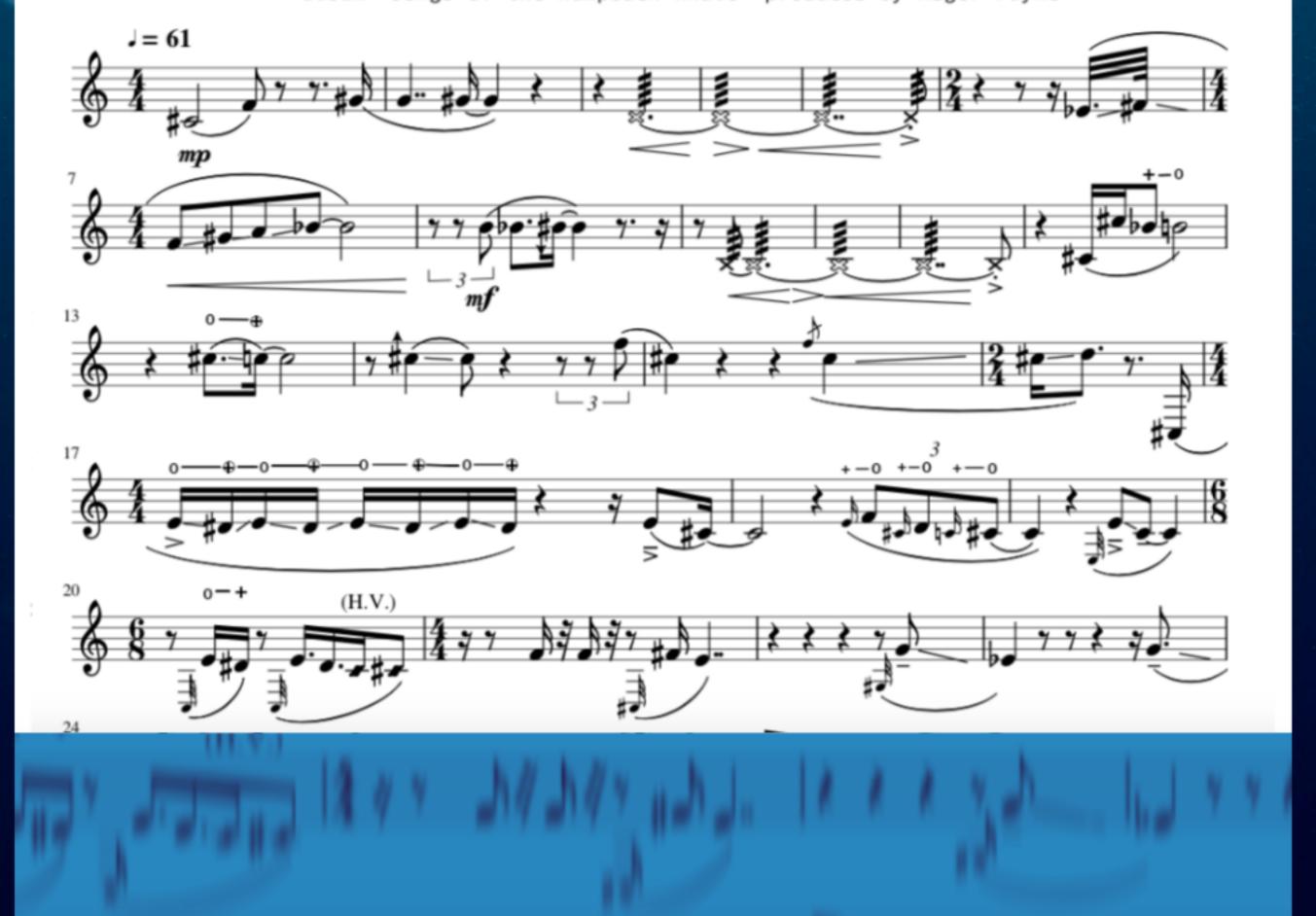
x Solo Wh

Stereo, 441 32-bit float

X Solo 1
Mute
Stereo, 4
32-bit float

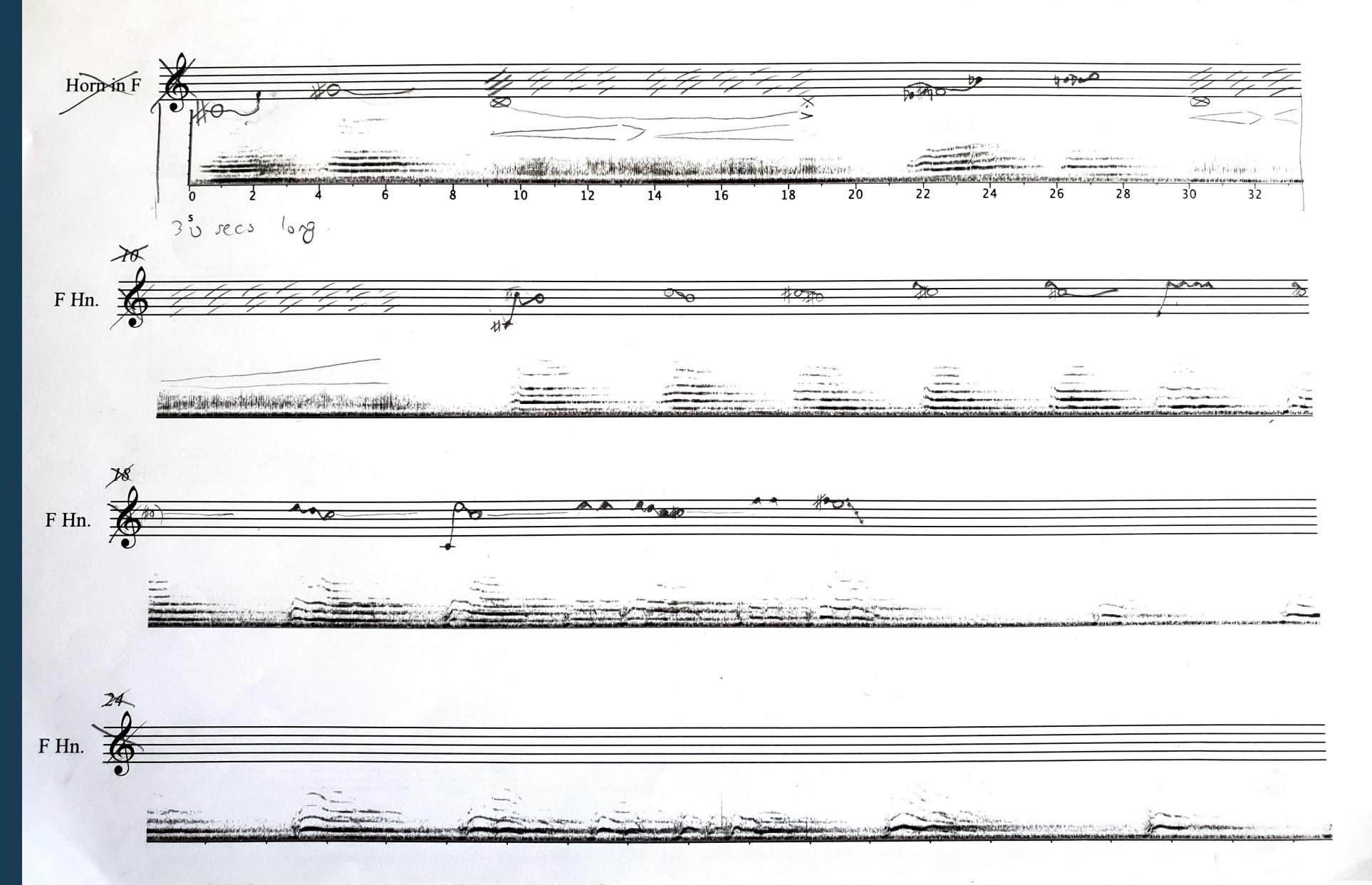
### SOLO HUMPBACK WHALE

Based on recording by Frank Watlington relased on the 1970 album 'Songs of the Humpback Whale' produced by Roger Payne

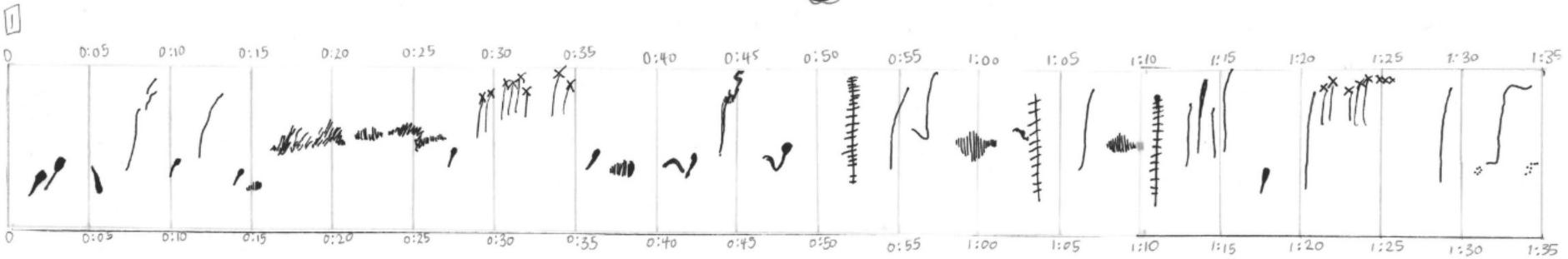


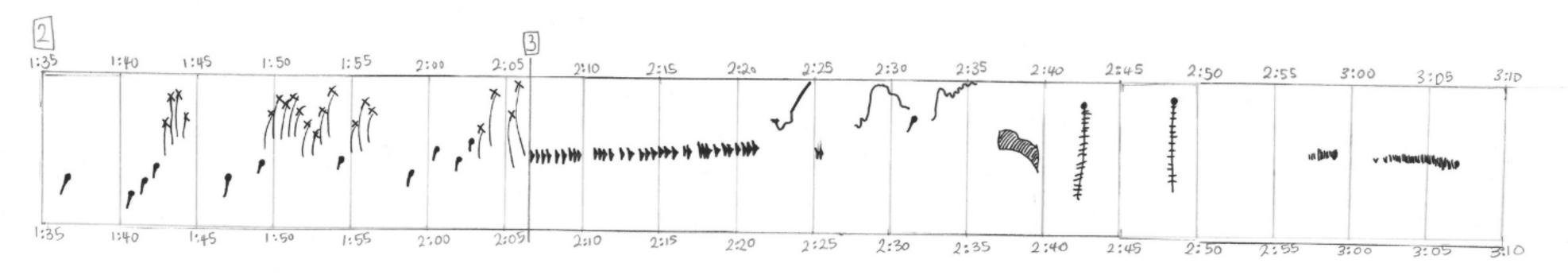
## Solo Humpback Whale

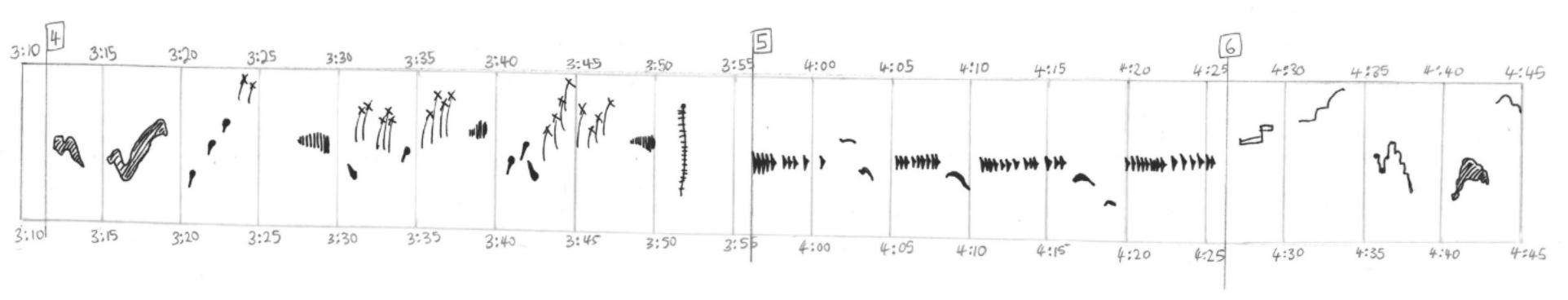
Abigail Sanders (but really an annonymous whale)



# Flacier Bay Nov 2020







I Whop I teop Stride allo Grunt M//Bonshee / Kisses - Moo & Moodhap & Siren : Tikahkahik # Wood Bunheep @ Groon



Music: Abigail Sanders

Dance : Nadja Dances (Haas)

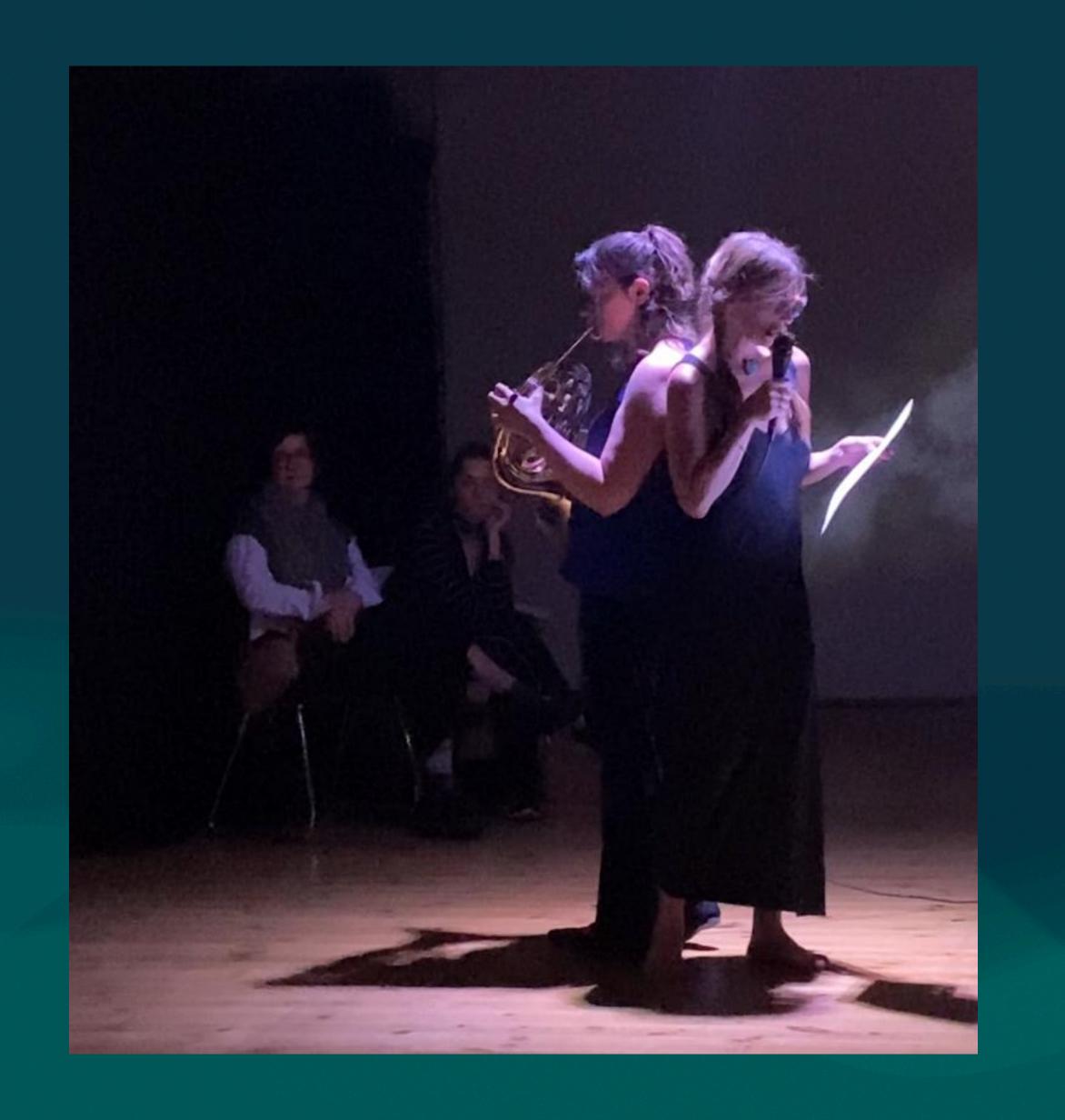
Lights & Visuals: Warja Rybakova

Samstag, 10.05.2025 | 19:00 Uhr

DOCK 11 Kastanienallee 79 10435 Berlin

13.- Euro





## Results of Blue Performance Research Questionnaire

Number of forms returned: 7

**Further Comments:** 

How did the performance of Solo Humpback Whale make you feel?

Bass notes —> Calm

Melancholy towards human treatment of whales, song sounded beautiful but lonely

Calm 5
Curious 4
Happy 1
Sad 1
Excited 1
Joy 1 Pensive/Thoughtful 1

I could imagine I'm under the water deep sea like whales levitating

To know that they sang songs, and that they changing that songs like human was deep and great experience to me

The performance leads to a slowing down, slower tempo of thoughts, feelings etc.

That lead to introspection and peacefulness

## Results of Blue Performance Research Questionnaire

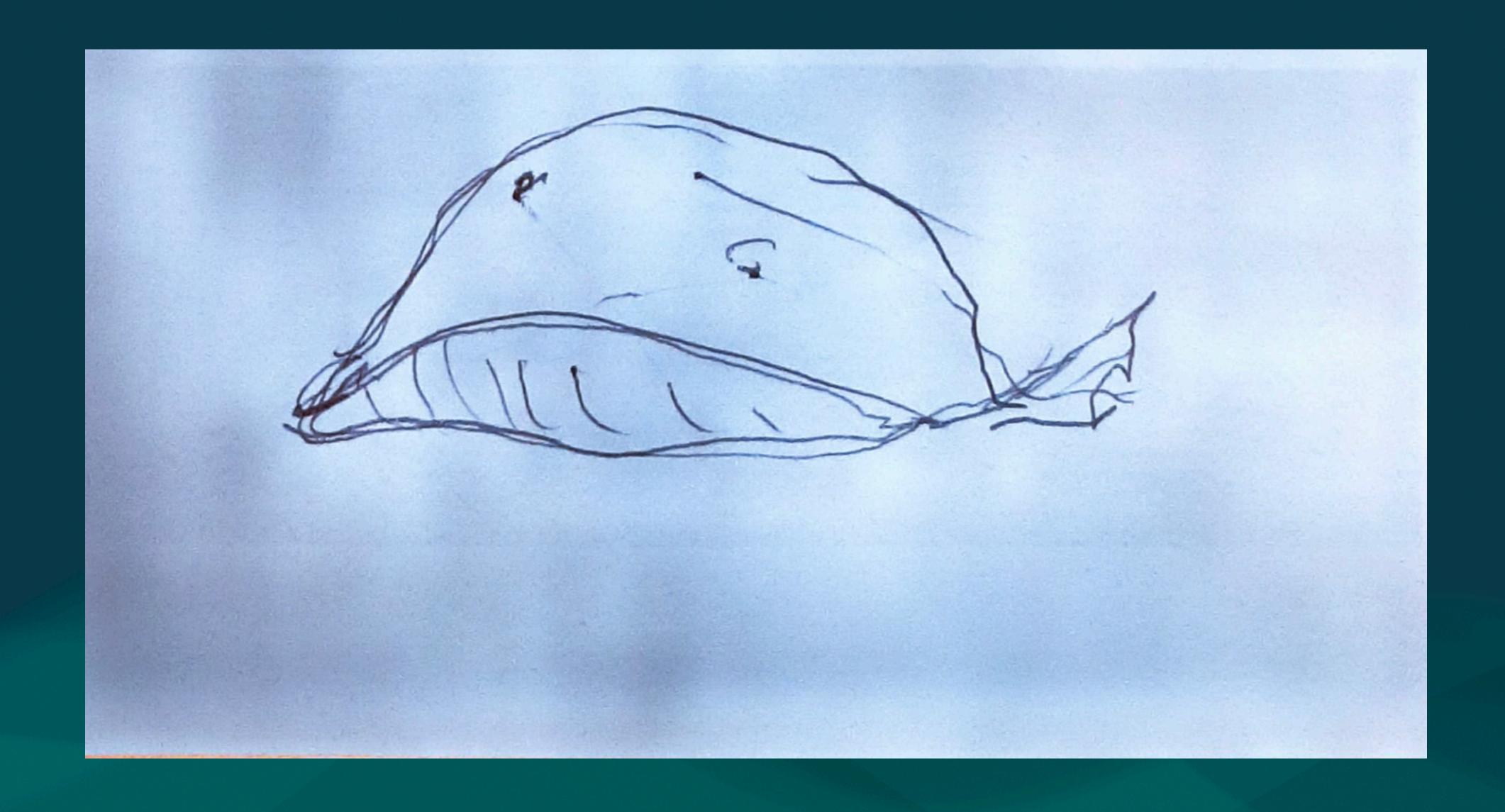
Did the event change your mind about whales or the relationship between humans and animals in any way?

**Yes: 4** 

No: 3

If yes, can you describe how?

- I was not aware of the whole history behind the whale recording. Thank you!
- Always been empathetic and connected to animals, but this has added toward my curiosity for whales
- I felt more connection through the whale songs being played on the horn. The live performance aspect contributed too. Not objectifying whales but engaging with them and their songs, like musical partners or fellow musicians





https://imagininggodzilla.fi/



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