O.K. ON MATERIAL SENT. BIG NFG ON PRIMARY COIL CONNECTION. THE CONDENSER LEADS MUST BE ON SOME SIDE OF PRIMARY LOOP, NOT OPPOSITE SIDES OF LOOP. NO HALF TURNS ALLOWED!

GLASS PLATES WITH COPPER SHEETS BEST "TESLA" CONDENSER. IT IS HARD TO GET A GOOD CONNECTION TO ALUMINUM BUT OTHERWISE IT'S O.K.

GLASS HAS A HIGH DIELECTRIC ADMITTIVITY AND LOW LOSSES. THIS IS THE BEST POSSIBLE COMBINATION. MARCONI PUT THESE IN EARTHENWARE TANKS FILLED WITH 10-COIL OIL TO EQUALIZE GRADIENT IN POOR METAL TO GLASS CONTACT, WHICH BY TESLA, MUST BE PERFECT.

DO NOT USE RESISTORS ANYWHERE, BAD JOB JOO. SHUNT THE PRIMARY WITH SOME CAPACITY. THE TERMINALS MUST BE NEXT TO EACH OTHER.

CLOSE GAP CONDENSERS COIL LEAD JUST LIKE CONDENSER CLOSE AND FLAT/ WIDE.
Since you have a multi-turn coil, then right angle connections are required, otherwise same close.

Using coax multilead connections to coil is right but your connector is not so good. Face to face metal contact a must to keep magnetism trapped in the primary circuit. No leaks allowed just like plumbing. In your setup about 30 psi strength O.K.

Hard way

A lot of room taken up this way, it is best to fold terminal line this way.

Easy way

Also, try smaller and smaller capacitance on the extracoil input, down to about 50 pF and graph change in frequency vs capacitance in pico farads. This is an important experiment.

Your primary/secondary looks like Colorado springs, I would say you have a scale model of it. Primary inductance is found by the sheet inductance equation in books. The Wheeler formula is not right, it is for solenoids only.

\[ L = \frac{V}{A} \cdot \frac{1}{2 \pi f} \]  

Henry
Sheet inductance is given by (for primary loop)

$$(A/w)N^2 \times \alpha$$

Henry

where $A$ is loop area, $w$ is strip width, $N$ number of turns, and $\alpha$ is a constant from books. I cannot over emphasize NO LEAKS of magnetism are allowed. And remember, resistors by very definition are lots of little holes leaking magnetism into molecular dimensions. NFG.

On a side note, a lot of shit on Forum, "Lucifer Light Ship", Commonwealth, and "Joe Blow L. Livermore Labs" yes bombs and whales, one down the throat, the other up the ass! Their too fucking much! I aim for the experimenter like yourself and a silent majority in general.

I have to be a bit totalitarian in demanding that the terms of Steinmetz and Tesla must be strictly adhered to, it is an order by the captain, the Navy way or it "just ain't gonna float." Same with instructions regarding construction or testing procedures, these must be followed exactly. Finally, all details are to be put on forum, it does not matter if it is full of shit, that can always be skipped over by anyone seriously after some useful data. (I had to "bare" the seller system at shipyard, so no big deal here.) I try to find tuning condensers from old radios for your efforts. You need to get some capacitance on that primary. You can measure primary inductance by measuring its back e.m.f. at some frequency between 10 to 100Kc. That is how Tesla did it. So keep sailing forward...

73 de NG4TH.
Primary Inductance Test

METER
E.M.F. Inductance
Method

Test Oscillator

R.F. Milliamperc Meter (Thermocouple)

F = 10 → 100 Kc
Best ESR in
This Range

E/I = ωL

E/ωI = L

ω = 2πF

30 Kc/s Sine Wave Good Start

Rectifier
Type A.C.
Voltmeter

0.001
Milliamp
Ceramic
Optional

Scope E.M.F. Inductance
Method (Series Resistor) R

E = e/√2

E/I = ωL

R < 5Ω (1 Watt, Best)

R is a Carbon
Resistor
5% Tolerance

e_s & e = Scope Peak
Voltage (1/2)
Peak to Peak