

Great Indoor Duration Site – Slanic- Prahova, Romania.



Slanic Prahova – when I first took up this pastime in 2009 it was mentioned in hushed tones – with people saying “never again” and such like, at the time it never occurred to me that I might make a team that is actually competing there (Mar 2014). Ah well - it’ll make a bit of a change from Belgrade!

The site is about 100km north of Bucharest and it was a veritable salt mountain with deposits ranging from 50 to 500 metres in depth. There are 2 levels of “caverns” resulting from the earlier salt extraction. Indoor flying takes place in the upper workings and has a ceiling height of 230’(the width is 110’ and length 390’), the lower workings, which I believe are even more extensive, are now used as a health Spa and for other tourist/leisure activities.

As I write this the British team are making final preparations for attending the 2014 World Championships here. Only one member of the team has flown in the mine before, although we have many former team members who can advise – but of course techniques change over time.

If anyone would like to add their personal recollections/photos of previous events in the mine I would be delighted to include them here.

Slanic has hosted many memorable World Championships over the years and some great flights have been made.



World Championships.

1970	37:52	J Kalina	CS/USA/ROM
1982	36:56	A Morar	ROM/GBR/USA
1994	44:23	S Brown	USA/ROM/HUN
1998	45:13	S Brown	HUN/USA/GBR
2000	47:21	J Kagan	USA/GBR/ROM
2002	36:15	J Richmond	USA/ROM/GBR
2004	36:02	J Richmond	ROM/USA/HUN
2006	35:14	L Cailliau	ROM/USA/HUN
2014	37:33	Kang	USA/ROM/FRA

****See note**

New Rules

**** John Tipper (UK)** won the Kopecky cup for the longest single flight of 47:21

We know it is dark, cold (11 ~ 12 degrees C) and humid – so it should be relatively easy to fly an F1D at 200'+ then.....

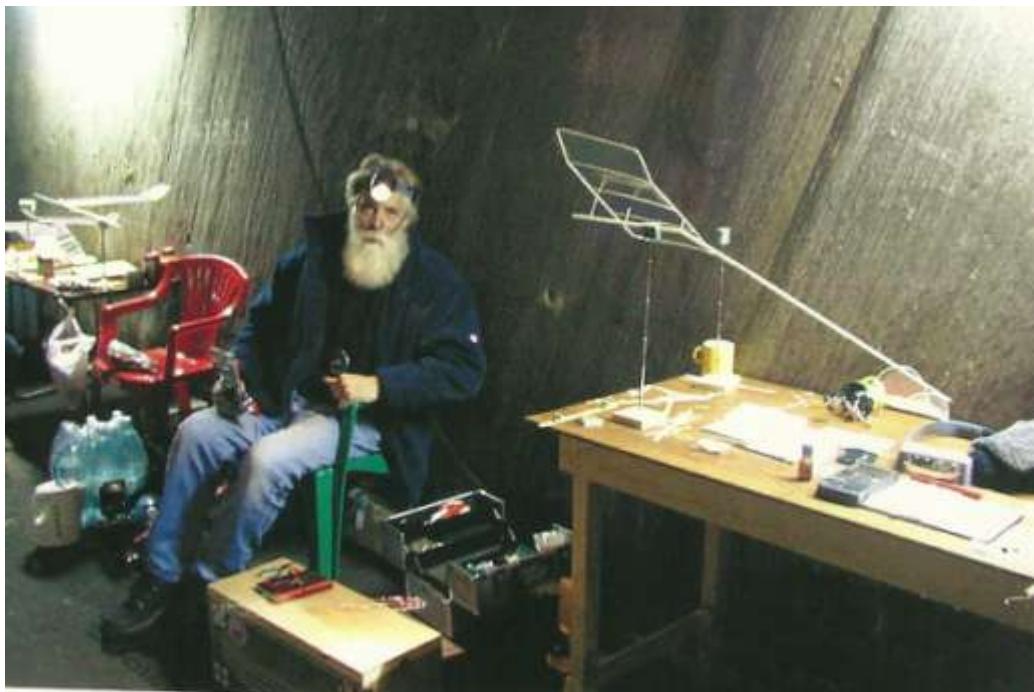
Take a look at this youtube video of the 1998 World Championships

https://www.youtube.com/watch?v=QS_9rv1m-fs

On the face of it we can deal with these things but there remain many warnings of the difficulties facing us. One of our biggest challenges is being able to prepare our models for this high ceiling event – Slanic is about 230' high and the roof narrows considerably at the top – currently in the UK our highest site is 50' and access even to this is limited. 230' is not the maximum height that a free flying F1D could achieve, in theory therefore a VP could extend duration. We are hoping for a test session in February at our 50' site in order to asses which might work best. In truth we won't know until we fly in Slanic though!



Geoffrey Lefever's models in 2002



Above and below -the late Ron Green with droop Boom models in 2002



Conditions in the Mine seemed to have improved; the temperature was as expected 11 degrees but it felt very dry so humidity was low and as a result no-one really felt the cold. Of course one needs good warm clothing because you are in the mine for 9 or 10 hours. Up to about 100' it is quite easy to follow the model's flight then you have a dark zone where you definitely need to keep an eye on things with a powerful spotlight, thereafter the lighting around the catwalk takes over and you can easily follow the model at the ceiling.

Our initial challenge was to get the model to fly around 100' on a half motor, it took some doing and for some reason the prop. settings used at our test in Boulby were not repeating here. At Boulby I had managed good climbs with some VP movement but here I had little or no movement – of course there is still some hub movement as the yoke yields slightly under the motor torque. Best rubber size seemed to be 1.26gm/m.

There is a full report under the News section, suffice to say the event was won by the USA and longest flight, as well as individual honours, went to Kang Lee with outstanding flights.

The UK team came 6th having struggled a little in the final stages to secure clean climbs, all looking forward to the European Championships this coming March.

Below I've reproduced an article by Larry Cailliau, individual winner at the 2006 Slanic World Champs in which he describes how he overcame the difficulties presented by the mine.

THE 2006 INDOOR WORLD CHAMPION

My first trip to the Salt Mine was a real learning experience. The challenges the salt mine offers are much different from what we in the U.S. are accustomed to. The first would be the cold and very humid conditions. The second would be trying to get the model to climb over 200 feet. The third would be trying to fly in the dark.

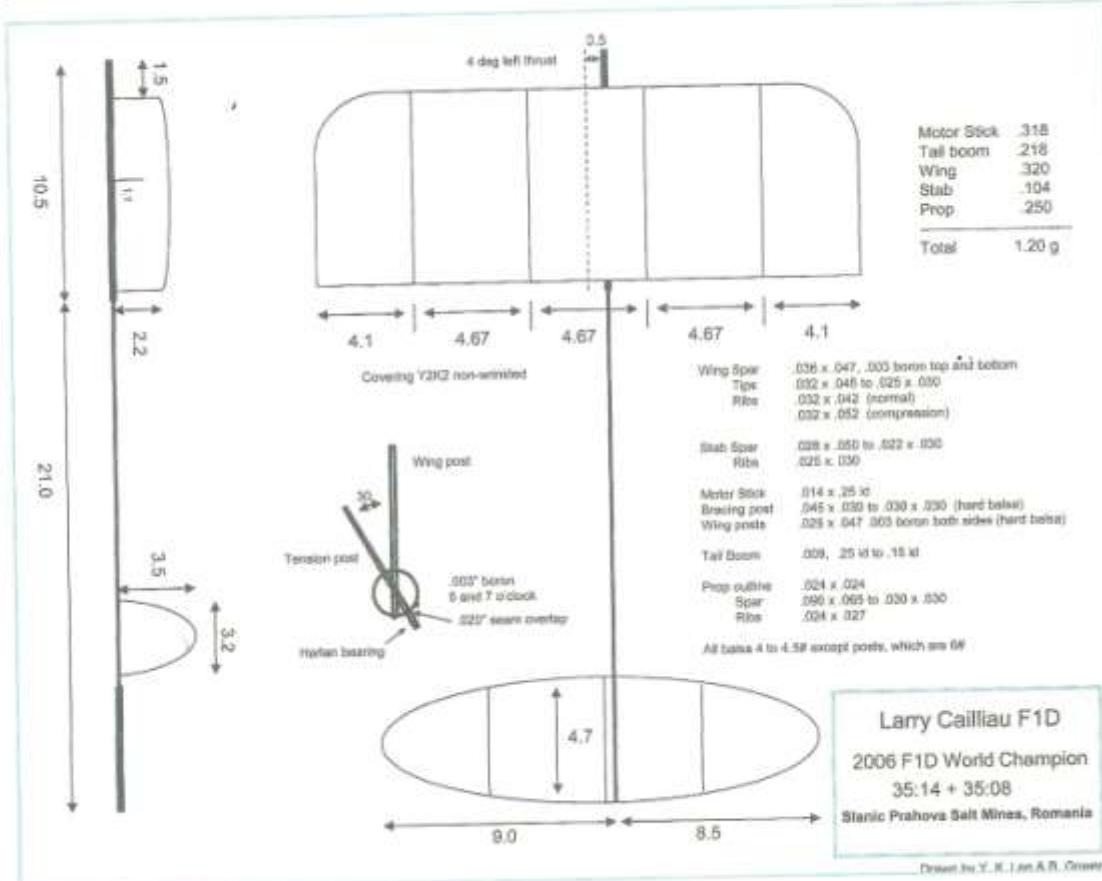
After returning home I set out to develop a model that would be competitive in lower ceilings yet capable of conquering the salt mine. My old braced wings gave out to the newer unbraced wings because the braced wings wanted to fly straight under max torque. Many competitors had problems with their models stalling

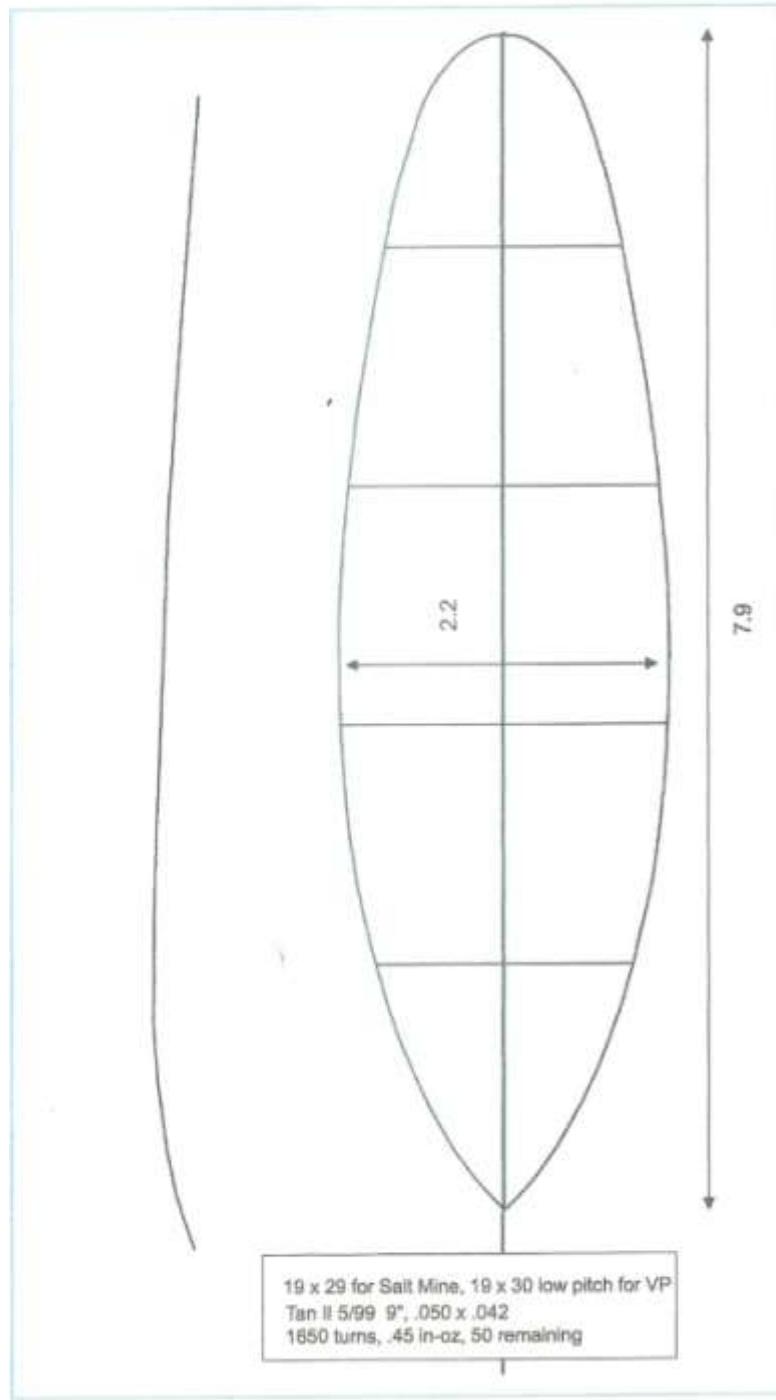
out at about 60-80ft. I contributed this to the models being vectored almost straight up at a high speed and very high torque. When the power burst diminished, the motor stick would straighten out causing more negative incidence in the stab causing the model to eventually stall. Because of this, I made stiffer motor sticks. The humidity made my stabs floppy and again under high speed a floppy stab is detrimental to stability. I changed my stab plan form to a more elliptical shape, thinking it would have fewer tendencies to twist. I also increased the root of the spar from .045" to .050". These were my major design changes.

The summer of 2006 was spent trimming five models for the salt

mines. I remember Jim Richmond telling me that I needed to climb about 75 feet on a quarter motor, which would be equivalent to salt mine conditions. At Champaign, I tried for two days experimenting with different props and trim setups. However, I was unable to achieve this. I again consulted Jim and he told me that a 19" diameter, 29" pitch prop would get me up. When the all-time world's best speaks, I listen!

When Johnson City came, I was equipped with my new props and had spent three days of quarter motor testing. Sure enough, all five planes climbed to 75 feet. Minor trim changes were made. I found that my models flew best for ultra-high ceilings with 0





stab incidence and about 1/8" positive incidence in the wing. This was opposite to my low ceiling setup.

Day one in the salt mine was very disappointing. It was testing day and I could not get my quarter motors high enough. I was only getting about 7-1/2 minutes. After working all day it was time to quit. I was tired and disgusted. In the middle of the night it came to me, that I was using sport rubber 1/4-motors which I made for initial testing because it was hard to break. The guys laughed, and eventually I myself thought this was kind of comical. The following morning I was eager to get some 5/99 on the model to see if this was truly the problem. At last, things were looking up, proper altitude and 9 minutes plus.

Round one of the competition came and no one wanted to fly first. I volunteered. The flight could not have gone better, cruising just below the ceiling and staying centered the whole flight, touching down at 35:14. Little did we know that this would hold up to be the contests best flight!

Round two appeared to be going good with the model centered at the ceiling again. But Oh no, it started drifting to the side and was following the same pattern as John Kagan's previous flight over the catwalks. Team manager, Ray Harlan, suggested that I attempt to steer it. It was a risky but necessary situation. The model was barely visible but somehow it flew onto the line. I was able to guide it back to the center. Getting it off of the line was even a bigger problem because the balloon was hiding the light on the airplane. It was just too dark. I made a guess at what angle to pull the line from the model and quickly moved away while asking everyone if it was off the line. What luck! With the model now centered perfectly, the flight continued undaunted, and landed at 35:08, good enough for the win. 

Larry Cailliau