

# ADVENTURE OF THE HEART

## III

### HOW TO SET A WORLD RECORD WITHOUT REALLY TRYING!

by Rich Jaworski



*Above: After the hot inflation, Rich settles in the harness preparing for a long cold flight. photo by Orv Olivier*

*Opposite page: Adventure's condensate cloud forms after each burner blast from warm air leaving the mouth of the envelope. photo by Matthew Grote*

Setting world records is never easy. In fact the record we intended to improve by this flight, the AX-4 duration of 23 hours 11 minutes which Adventure set in 2007<sup>1</sup>, was never challenged by this 19 hour 3 minute flight using basically the same equipment. This 2008 flight happened to cover a distance of 250 miles and unintentionally surpassed Oscar Lindström's 2001 record for the AX-4 distance of 210 miles. (Sorry Oscar!) As noted by Bill Bussey who had several problems during his 1996 AX-6 duration flight<sup>2</sup>, "Murphy Lives."

Our 2008 flight was full of "Murphy's." For safety sake, contingency actions to address in-flight problems were pre-planned and utilized. Unfortunately problems with fuel consumption calculations, weather, temperature/velocity profiles, and terrain were encountered. All of these combined to put the pilot in a situation which was intended to be avoided. Somehow our shot at improving flight duration ended up as a "Mulligan" which landed in the dark Wisconsin night with a distance record as a consolation prize.

Because the 23 hour flight in 2007 was shortened by the accumulation of 100 pounds of ice in the



envelope, modifications were made to limit ice formation. Two test flights were made in Nebraska at warmer temperatures which confirmed the operability of these modifications. All we needed to improve the 2007 duration was the right weather! Unfortunately last year's minus 27°F ambient temperatures were not in the Grand Forks, ND forecast during January, 2008 so we decided to fly with the first minus 10°F weather available. It also happened that the minus 10°F weather occurred during full moon which would enhance night flight vision.

Launch preparations went smoothly with the help of Grand Forks' aeronaut, Duane Hanson and his family; the Grand Forks Flight Support who let us practice our inflation procedure, without envelope, in their hanger; and the Grand Forks Country Club who allowed us the use of their wind sheltered parking lot and club house.

All went as expected for the 9:30 AM launch and first eight hours of the flight except the air temperature was warmer than desired. At eight hours the first fuel tank expired. A total distance of only 39 miles had been traveled. During that period, altitude was maintained as low as possible (50 to 500 ft. AGL) to keep the balloon

in the surface inversion at speeds of less than 10 mph. The real "surprise" was that the "eight hours" was expected to be "nine hours" or more. Also, during hour eight, the

surface winds increased to 15 - 20 mph, not predicted, and the sun set as predicted. A recalculation of the fuel consumption rate re-confirmed adequate fuel was on board to fly through and beyond sunrise the next morning.

With the flight's night time heading and speed, the chase crew, composed of Matthew Grote, Wayne Mohring, and Gary Hen-

drickson and NAA Observer Orv Olivier, projected the track to the Northeast and a forest landing very close to Lake Superior. After long conference calls with weather consultant,

race through the snow filled woods below at speeds as high as 35 mph, I wondered how one would ever land without significant damage to the balloon and the pilot who was sitting in a harness freely suspended above the fuel tank. It was comforting to know that the fuel consumption calculations

had been reviewed and adjusted for the reduced duration of the first tank and still projected landing well after sunrise. Landing during the night did not appear to be a good option.

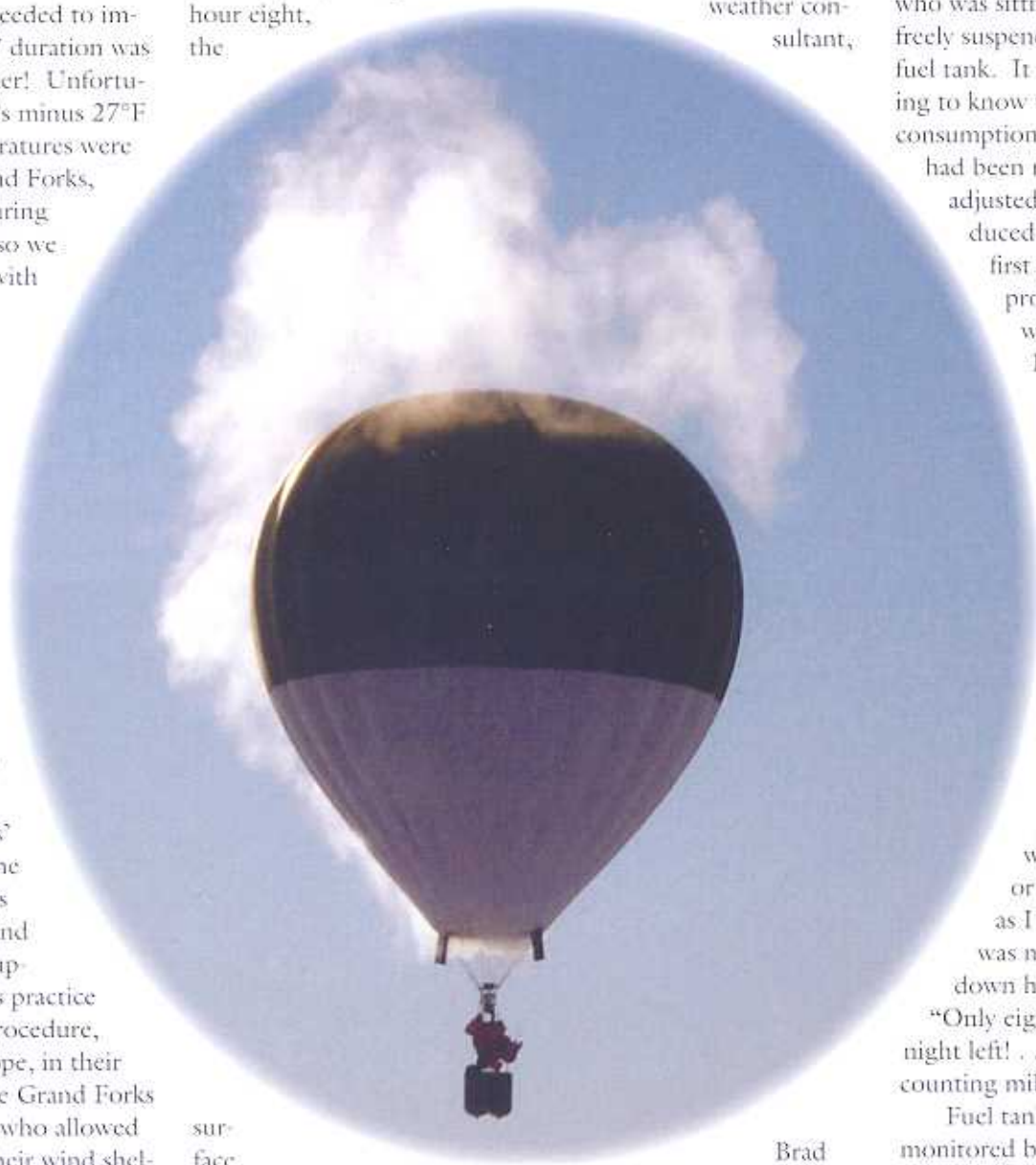
Through the night, the icicles formed on the mouth lines. The chase crew radioed to announce their departures to get around large wilderness areas or where they were as I passed over. I was mentally counting down hours to sunrise, "Only eight hours of night left! . . ." No one was counting miles.

Fuel tank inventory is monitored by spring scales which begin to indicate when 10 gallons of fuel are left, enough fuel to fly for two or three hours. The first scale movements began around 3 AM and were definitely confirmed as true by 4 AM. Speed: 22 mph at 600 ft AGL. I radioed the crew that we were not able to fly to sunrise.

Several years ago in a discussion with Nebraska's gas balloonist, John Kugler,

Brad Temeyer, the crew recommended flying at 1,000 ft AGL or higher to avoid the North's more dense woods and the Lake. After discussing the basis of the recommendation, at the cost of flying for a shorter duration, the altitude was increased and maintained at 1,000 ft AGL with a resulting heading of 115 degrees.

As I watched the balloon's moon shadow





about the high wind landings frequently encountered by gas balloonists, John said, "You just have to land it, you just have to."

Landing preparations, putting on a helmet, and stowing equipment took about 10 minutes. Speed: 17 mph at 200 ft AGL. The crew radioed that they were about a mile ahead of me on a tree-lined highway -- between me and the brightly lit town of Siren, Wisconsin. They advised not to land too close to town in order to avoid power lines. And some good news, "The last flag we saw looked like about 7 mph."

Depth perception is always difficult over a large

flat surface and it is impossible in the dark with the intermittent burner disrupting the little night vision gained between blasts. I was surprised when the fuel tank crashed against something and pulled the top as I was thrown onto ice and drug for 50 feet across a wonderful one mile wide lake. I hadn't felt this lucky since I walked away from my one power line contact in 1979. Other than unsteady legs from reclining in the harness for 19 hours, all body parts were functional!

As a result of our 911 call to the sheriff requesting directions to access the lake, the Siren Volunteer Fire Department initiated a rescue

drill at 4:30 AM on a cold and clear Sunday morning. After our crew had packed up and carried the equipment a quarter mile across Big Doctor Lake, about 15 firemen met us and ordered the pilot to lay down in a transport cart pulled by an ATV. After a quick medical check in their ambulance and signing a refusal for additional medical assistance, we posed for pictures, finished packing gear, and headed for the heated fire station. And -- oh yeah, we just set another world record!!



#### References:

- 1) "Adventure of the Heart 2007", Ballooning, March/April 2007
- 2) "Murphy's Law is Alive & Well", Ballooning, May 1996.



*The Siren, Wisconsin, Volunteer Fire Department and Rich (front row - center) following the 4:30 AM ice rescue drill and record flight. photo by Matthew Grote.*