

Zapata – the World Record Encampment

“I think everyone is missing the boat going to Hobbs or Wyoming every year.” Gary Osoba had leaned forward in his chair on the patio of an East Wichita restaurant. “You can’t get started early enough, you can’t get a consistent enough tail wind, and it’s too easy to be shut down early by overdevelopment.”

That was back in June 1999, when Belinda, Dave Glover and I had stopped in Kansas on our way out to Hobbs. As we had pored over the map spread out among the remains of our meal, Gary had pointed to an area southeast of Hobbs. “I’ve been looking at the weather patterns, and I think you want to start from further east, over in Texas — maybe as far south as Brownsville. I think you could get some really long flights down there”

And so the seed had been planted for what Gary would later whimsically title the World Record Encampment, an expedition to an obscure place in southeastern Texas right on the Rio Grande — the small town of Zapata.

Gary had been studying Texas weather data for a several years. Although he already held more sailplane world records than any other glider pilot, he was hungry for more — and the intellectual challenge of finding the “perfect” place continued to intrigue him. Looking for a specific pattern that would provide the necessary conditions, he had noticed a large meteorological feature that develops in the Gulf of Mexico during the summer — the extension of the Bermuda high.

This high-pressure region is so big that it dominates the summer weather from Florida to West Texas and from the Yucatan to Oklahoma City. The center of the extension of the high pressure, when situated just right for world records, lies south of New Orleans and east of Brownsville, Texas.

The winds associated with the Bermuda High, as with any high pressure area in the northern hemisphere, circulate clockwise, bringing southeast winds to South Texas. And this high pressure system isn’t a once-every-couple-of-days kind of thing, but a consistent pattern. In the summer, day after day the high remains out over the Gulf of Mexico with the winds consistently rotating clockwise around it. Weather disturbances coming from the west and north generally bounce off it and go up through Kansas or the Dakotas. This consistency was important to Gary because it could dramatically increase his chances of setting a world record during a one- or two-week visit.

Earlier that year he had flown south out of Uvalde, a popular sailplane port just west of San Antonio, looking for the conditions it would take to fly his ultralight Carbon Dragon the 450 miles to set a world open-distance record for ultralight sailplanes (and Class 4 hang gliders). From Uvalde he had cruised toward Crystal City, but he hadn’t made it as far south as Laredo.

The terrain looked promising, he thought, but no one he knew of had ever flown a hang glider or a sailplane in extreme South Texas, so he didn’t have any local lore to provide guidance. He knew that moist winds would be flowing out of the Gulf of Mexico, and that cumulus clouds would mark the lift coming off the warm flat alluvial plain below. He wondered how far south it might be possible to start a cross-country flight.

Gary had spent some of his youth in east Texas, but he didn’t have much on-the-ground familiarity with the areas on the border, around Laredo and McAllen. He didn’t know if there would be suitable landing areas for a pilot who landed early. He didn’t know if there was an airport that would let soaring pilots set up camp there.

Gary’s usual strategy was to get going very early in the morning — much, much earlier than most pilots thought it was possible to stay aloft. Once in the air, he would hang out in the lightest of lift, drifting with a favorable wind, and just hold on until the day got better. Gary had already used this strategy to his advantage in competitions, taking advantage of the Carbon Dragon’s low sink rate to get out on course ahead of all the others, making up for the fact that he couldn’t fly nearly as fast in the heat of the day as they could. If he could get going early enough, he felt he stood a good chance of setting another world record.

The historical weather records indicated to Gary that cumulus clouds would start forming soon after dawn near Laredo to provide visual help, showing where the lift was early, when conditions were light. The extra help of the cumulus clouds would make it just that much more possible to stay up in the light morning lift. He figured that by afternoon he should be able to reach the Hill Country just to the north of Uvalde. Those hot, convoluted rocks the size of hills should be cooking by then, providing plenty of strong lift to get him up high and onto the Edwards Plateau in short order.

Despite the lack of previous long distance flights in sailplanes or hang gliders from South Texas, all the weather records indicated that this would be a very fruitful spot. Gary figured he should be able to make it to the Texas panhandle by late in the afternoon in his Carbon Dragon, into an area of high winds blowing north. With five hundred miles behind him, he believed he should be able to set a new ultralight sailplane record of over six hundred miles.

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Ever since that evening in the Wichita restaurant, Gary and I had been e-mailing each other, mulling over the idea of a flying safari to South Texas, hashing over possible locations. Gary had intensified his review of twenty years worth of weather data, which was available thanks to the World Wide Web and the industrious National Weather Service. His analysis told him that south toward Brownsville he should indeed be able to find the world record place that he — and by now we — were looking for.

In spite of Michael's death in Hobbs, I felt that it would be worthwhile going to South Texas. I had really enjoyed my big flights in Australia, where I still thought it was possible to set a world record. Now, with Gary's enthusiasm and my trust in his ability to correctly read the weather data, I felt that South Texas was just a lot better than anywhere else in the world.

If breaking Larry's record really was possible — and I sure hadn't believed that a year earlier — then trying for world records might not be such a futile exercise after all. I now had experience with a couple of two hundred-mile flights (well, one was 199.5 miles), so the impossible was now perhaps possible for me. If Texas was that much better than all the other sites people had tried, well then maybe it was a goer.

I'd been in contact with pilots around the world through the Oz Report who had a lot to say about their local versions of the world's best site to go long distances. The Brazilian pilots were especially enthusiastic about Quixadá, a site in northeastern Brazil. As in South Texas, you could get an early start there because of the sea breezes, and there was always a steady tailwind. The problem was that this Brazilian site was too close to the equator, so the day length was too short. The thermals stopped at 5:30 in the afternoon, and it was dark by six. In Texas you could fly until 9:45 if you flew within a few weeks of the solstice.

South African pilots were convinced that Namibia was the hot spot. Of course, they didn't mention the difficulty of following and finding pilots flying across the desert. Maybe South Texas wasn't the most scenic spot in the world to set the distance world record, but just because it was conveniently located didn't mean it wasn't exotic enough to be just that.

Now as the summer of 2000 approached, Gary had to nail down the actual launch site, with a place to tow, high early cloud bases, strong enough south to southeast winds, and at least basic amenities nearby. In June, as the high pressure in the Gulf of Mexico set up, he analyzed the hourly values for cloudbase, as well as wind speed on the ground and aloft. Picking two sites, one near McAllen and one further north on the highway to Laredo, he sent out the daily data to Dave Sharp, Kari Castle, Tiki Mashy, and me.

It soon became clear that Zapata, forty miles south of Laredo, had the best mix of higher early morning clouds and light winds on the ground with stronger winds aloft. Gary phoned the Zapata Chamber of Commerce as he tried to determine whether this was the spot. He reported to us on his conversation by e-mail:

I might be blowing it here. From my cyber-perspective, today looks about the worst weather-wise for quite a while with oppressive high pressure down there.

Even so, I just got off the phone with the Chamber of Commerce staff, and off-hand remarked that there's probably not a cloud in the sky. They looked outside, and said:

Zapata: "No, there are puffy clouds but they're just scattered around. They're not very much bunched up together, which is what I hear you want."

Gary: "Really...I'm surprised. But we do want them to line up together."

Zapata: "Yeah, they're kind of spread apart like a bunch of different lines across the sky. They just look like several lanes in straight lines. Maybe it will get better before you get here".

Gary: (To himself) "Fish in a barrel". (To Zapata) "I'll bet the wind's not blowing very strong today, is it?"

Zapata: "Yeah, that's the good thing because usually when the cloud lanes are everywhere it's just so windy. It's only blowing about 15 mph today. Maybe when you get here, there will be lots of clouds and the wind won't blow so hard."

Gary: "Righto".

Ooh, it looks like a perfect day. Too bad we aren't there yet, and won't be there for a while.

In addition to the consistency of the high that centered itself in the Gulf of Mexico, what made it unique was how big it was. Stability would give us the same good conditions day after day. But the size of this weather feature was what would make straight-line flight downwind possible.

If you are intending to go far in one direction, you want a tailwind that will stay with you in a straight line throughout your whole flight. Winds are almost always circulating around a high or low pressure, although it is sometimes possible to move along with a front that travels in one direction during the day. Given that in general the winds are circulating, it is difficult to find a wind that goes in a straight line — unless the circulation pattern is so big that the winds far removed from the center of the high or low pressure go in essentially a straight line.

Since hang gliders go so slow, it is hard for them to fly really far over the course of a single day. But if you can find a wind pattern that stays pretty much straight over five hundred miles, then you've basically got a consistent tailwind that takes you in one direction. Out west in the U.S. there are lots of mountains to disturb a wind pattern that would otherwise last for five hundred miles or more. All really long distance flights take place over the flatlands, because the land won't change the wind's direction.

Given the slow average airspeed of a hang glider, a strong tailwind is a large component of the glider's average speed over the ground. If the wind speed is twenty-five miles per hour, it makes up about half of the glider's average ground speed — so you could theoretically average fifty miles per hour. Stay in the air ten hours at that rate, and you've gone five hundred miles. Larry Tudor had averaged only thirty miles per hour to set his 308-mile record, so we knew we had yet to tap the full potential for using a strong tail wind to go really far. If we could find a site that provided twenty- to forty-mile per hour tailwinds for most of the day along the line of flight, we would have a real chance.

While a hang glider can easily glide at fifty to sixty miles per hour in a straight line, you've got to spend at least some (maybe half) of the time circling up in thermals to gain altitude. After all, when you're gliding you're most likely losing altitude. Spending time circling doesn't get you anywhere, unless you're drifting down wind at the same time. Then again, the stronger the lift, the less time you have to spend circling.

The more hours you can spend in the air, the further you can go. The earlier you can start, the more hours you can spend in the air. Gary believed it would be possible to start soaring in his Carbon Dragon at around eight AM in Zapata. This meant he would have twelve to perhaps thirteen hours of daylight within which to set a record.

Conditions are going to be weaker in the early morning, but if it is possible to start flying at eight AM, then whatever distance you get is better than staying at the airport waiting for better conditions. What makes this possible is the early organization of the lift by the wind. If cloud streets, which are created by the wind and lift, start forming before nine AM, it is clear that the lift is organized. Lift that is weak due

to early morning low solar radiation is much more useful if it is organized. Cloud bases are low in the morning, but with cloud streets it is possible to stay in the lift until the day gets stronger and the clouds rise.

The flatlands of South Texas form a huge essentially flat convective surface — like a griddle. The winds coming off the Gulf of Mexico organize the convection on that surface. Even the hills of the Edwards Plateau, 170 miles north of Zapata, do not disturb the general flow of the convection and winds.

As the land gradually rises to the north and west from the Rio Grande delta, the winds coming in from the Gulf are also mechanically pushed up. By the time one reaches the hill country at Uvalde, it is only a seven hundred foot jump over ten miles to the Edwards plateau at 2,400 feet. This gentle rise positively affects the lift during the flight, turning a small part of the wind into a vertical component.

All our theories, calculations and observations pointed to one place: Zapata. By the time the dates for the World Record Encampment were finally set and we were on our way, the suspense was killing me.

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On the evening of July 15th when we pulled into Zapata after driving down from that year's Chelan Classic, the air was well over 110 degrees, with hot winds out of the north from central Texas instead of the cool moist air from the Gulf. Belinda and I had driven all day, and for the last several hours had seen nothing but eight-foot tall mesquite trees that seemed to blanket the red, rocky ground in every direction. "Landing should be interesting," she ventured. It scared me.

As we drove down the main street of this thin strip of a town, we found Gary, Dave Sharp, Dustin Martin and their drivers going into a small Mexican restaurant (the only kind of restaurant there is in Zapata). They'd been in town for a couple of days without getting any good flying conditions. We wondered what we'd gotten ourselves into. It was late in the day but still miserably hot.

I was glad to see Dave again. He'd always displayed strong hang gliding knowledge when I had flown with him in the national competitions, and he was fun to fly with. In the previous couple of weeks he'd been flying big miles from Hobbs and from Sandia Peak. He was primed to go far here in Zapata.

Dave, Gary and I had decided to invite Dustin, a shy, serious pilot still in his teens who had begun to do well in the national competitions, to participate in our little expedition. I had flown with Dustin in Florida the previous year. Kari hadn't been able to come and Tiki had gone to Hobbs, so there was a grand total of four of us pilots. Dustin had brought along a couple of buddies from Phoenix to help with the retrieval, rounding out our party to seven.

The others had taken advantage of the hospitality of Bob McVey, publisher of the Zapata County Record, and moved into his home (he was out of town for a few days). Belinda and I set up in a vast deserted RV park, emptied of the "winter Texans" who flock to the Rio Grande Valley in January for sun and bass fishing. That night fire ants invaded our trailer, going right through our bed on their way toward the kitchen. I guess we upset them by tossing and turning, because early in the morning we became clearly aware that something was biting us.

In Bob McVey we had found the perfect combination of host and guide. A native of Laredo who had lived in Austin long enough to learn to appreciate the finer things in life, Bob divided his time between a new second wife in Austin, and a home software business and the Zapata County News, both in Zapata. When he finally came back from Austin, he seemed actually pleased to have had his home and office invaded by scruffy hang glider pilots and their gear. We hogged his phone lines with our laptops and clogged his power outlets with our battery chargers. Without his support for us at the city council and chamber of commerce we wouldn't have even been in Zapata. While we hung around he filled us in on the local history and gossip of Zapata. He even wrote about us in his weekly column.



Bob told us that Zapata had first been settled in the 1770's as the residential center of a hacienda owned by someone of that name (not, however, the famous revolutionary Emiliano Zapata, whose picture is prominently displayed in many of the town's restaurants). The Spanish government, in an effort at colonization, had granted land straddling the Rio Grande to prominent families and army officers. Many pioneer descendants still live in the area, giving Zapata a decidedly south-of-the-border ambiance.

However, the Zapata of today dates back only as far as the 1950's, when Falcon Dam was built, putting the old town at the bottom of Falcon Reservoir. It wasn't hard to detect a certain air of resentment about this, not to mention the fact that hundred-year-old adobe homes without amenities like indoor plumbing had been valued by the U.S. government at next to nothing when it came to compensating the owners.

It almost seemed to add insult to injury that seven years of drought and a couple of new dams upriver had caused Falcon Reservoir to recede, leaving the old townsite high and dry. Our RV Park, the Lakefront Lodge, was now nowhere near the shore, its boat ramps and docks rotting in a big overgrown meadow.

"But you watch," laughed Bob. "If the lake ever does fill up again, those bushes will create the best bass habitat in North America. As it is they catch huge bass down closer to the dam, and there are alligator gar in there up to thirty feet long. A hurricane or two, and this town will be so full of fishermen you won't be able to drive through it."

Next day we found the Zapata airstrip, a paved runway five miles northeast out of town on the highway to Hebronville. It had one hangar, and maybe one small aircraft a week landing and taking off. Charlie Averitt, the airport manager, had bigger plans, and in his mind we were there to up the amount of flying activity around the airport. We were economic development.

We planned for Belinda to tow us all using the setup we'd brought from Australia: a two thousand-foot static line behind our truck, regulated by a simple hydraulic cylinder connected to a pressure gauge. With the pilot standing ready at the end of the runway, she would drive down the runway attached to the other end of the line until it had tension. When she heard the pilot yell "Go, go go!" into his radio, she would quickly accelerate to the predetermined pressure, then try to keep the needle steady by alternately slowing down and speeding up.

With only five thousand feet of total runway, much less distance than we were used to in Australia, we had a hard time getting much over a thousand feet high before it was time to release. We would need to find a thermal right away or land and try again. Meanwhile, Belinda and the other drivers would be chasing the towline, which seemed invariably to go over barbed wire fence on the east side of the runway into the prickly pears and mesquite thorns.

Sunday, the first day that we had set aside for practice in Zapata, was inauspicious. It took forever getting organized, so we didn't get launched until late in the afternoon. Did I mention that it was miserably hot?

We had a south wind, but without better conditions earlier in the day we were not going to be able to set world records. These conditions weren't nearly as good as they had been a few weeks earlier when Gary had been scrutinizing the hourly weather data.



To make matters worse, Gary damaged his Carbon Dragon. Unused to towing behind a truck, he released early and low to the ground without enough speed to stay airborne. Without sufficient air speed the glider pancaked into the ground, breaking its undercarriage. The whole structure of the Carbon Dragon was maintained by the integrity of its undercarriage. Gary wasn't willing to do a quick repair without being able to thoroughly test the glider afterwards. So, after two years of preparation, Gary became a disappointed observer and ground crew for the first World Record Encampment.

