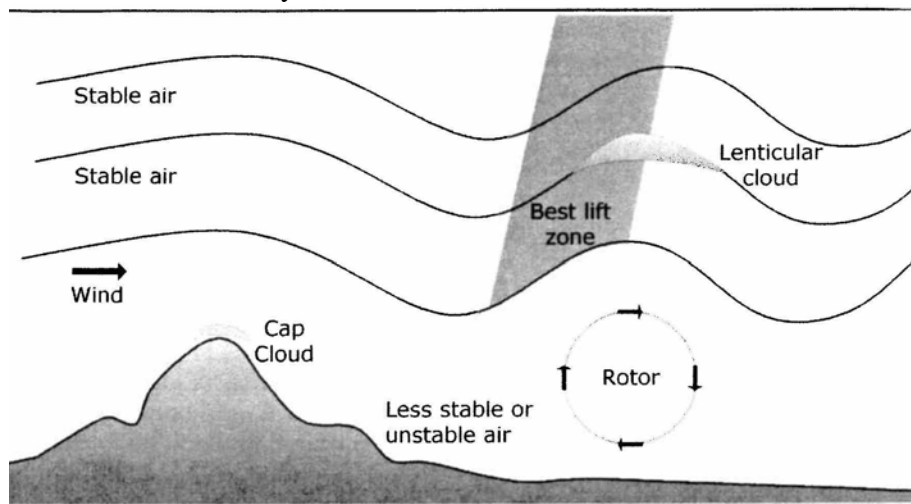


Wave Flying at Cal City- by Dan Rihn

For a couple of seasons now Dave Raspet has been bugging me to go to Cal City for Wave Camp. Dave knows that one of my big goals in life is to get all three Diamonds added to my Gold Badge. At the last Christmas Party he talked to me again and gave me the dates for 2009, I decided to count me in.

I had flown a little wave when I was a teenager in our club 2-33 at Fremont, CA, Sky Sailing airport with my Dad. One of my most memorable flights was my only solo wave flight to 10,000 ft in the 2-33 at age 14. I remember flying through rotor and freezing, 10,000 ft was about the limit of the wave and we didn't have oxygen. Now 40 years later I own a beautiful ASW-20, call sign Whiskey Oscar (WO). When the date came up I was all set, WO was all polished and prepped for the 2009 season, it's time for me to go and experience the wave at Cal City, REAL wave, serious wave!



My first attempt at flying Cal City wave was on Sunday 3/15/2009. The winds were forecast to be a little too much from the north to set up a good wave; the winds need to be pretty much out of the west for good wave at Cal City. I decided to go anyway and participate in the Wave Camp tutoring at least. I met up with Dave Raspet at the restaurant and later with Cindy B and Marty of Caracole Soaring. Cindy gave me a ton of information about flying in the Wave Window and Marty a ton more about flying in the wave. Later Dave Raspet and his friend Ben took off in Ben's Stemme and did find some weak wave. I decided to give it a try. I took a 6,000 ft (8,500 msl) tow to get up into the wave and met up with Dave and Ben. We played in the weak wave for some time but never really going far or going very high. I stayed up for 2.3 hours, it was good to be soaring again. I landed and put WO away, the next day was supposed to be better so I decided to take Monday 3/16/2009 off from work. Unfortunately this day would turn out to be dead calm most of the day. Delightful weather if you were on vacation but not so good for wave flying. Argh... I did spend a lot of time Cindy and Marty at the restaurant and learned a whole lot more about the complex airspace surrounding Cal City and a whole lot more about wave flying and reading the weather patterns to better predict wave. That time listening and learning would prove to be invaluable. Cindy and Marty have so much experience and knowledge to pass on. Later in the day I gave up and put WO back in the trailer and try again some other day, such is the way of life with soaring.

The next good wave forecast was for Saturday 3/21/2009. But I had already promised to go with my wife on a social club event. I had a wonderful time with my wife at the Banning House Museum and great dinner afterwards but I really got frustrated when I heard that Jerry Snedden and Mike Reid got to Diamond Altitude. Dang, a good day I missed out on! The next day was a total blow out all of Southern California had a huge wind storm. Double Argh.....!!!!

So I stayed home and helped Kathy Fosha and Jerry Clark work on their Libelle's.

After that storm blew through not much in the way of wave activity until Sunday 3/29/2009. The forecast was weird, sort of marginal, maybe too much out of the north, not enough wind etc.. I called Cindy and she put it into perspective for me, "if I don't come up at try I'll never get it, and if it's not good...oh well, you'll have to try again" "you can't get a Diamond sitting around at home".



So I set the alarm for an o'dark early and went to bed hoping for the best. On the drive north the wind was already blowing. I could see a lot of cloud activity, mostly rotor clouds and what looks like a ragged Lenticular cloud. Maybe today will be my day, I stop for gas in Mojave and instantly freeze, the cold wind is howling, isn't it always that way in Mojave. I remember reading Pat Russette's Diamond wave story and I remember him writing the same things. Good omen! I continue to Cal City and

go to the restaurant for breakfast. Marty joins me and he says it's looking up, "see the rotor clouds?...must be some wave". Hmm..no Lenticulars clouds but that is a nice Rotor cloud, yeah must be wave.

I pull WO out of the box and it goes together so sweet and fast...another good omen. Cindy drops by and tells me I made a good decision to drive up today, "classic Cal City wave day"...yup it's looking...interesting. I check the wind on my handheld manometer and it is already registering gusts to 20 kts, at least its right down the runway. I'm beginning to get second thoughts about this. I talk to Derrick the tow pilot about when I'd like to launch and he says he's ready when I'm ready. Then we make a small change in the order of flight, Cindy wants Derrick to take a customer up for a ride in the Grob, and that she'll do the towing. I decide why not let Derrick go first and let me watch him. I never like being the first, we used to call that "wind dummy in aerobatic competition.



We pulled WO out on the line and waited for Cindy to return. Now the wind has really kicked up and with blowing dust. The manometer reads a steady 20 kts now with gusts almost hitting 30 kts. I'm very much re-thinking this whole adventure. I strapped in and did my before take off checklist, Cindy calls me on the radio; she's on her way down and asks a few key checklist items. I thank Cindy for looking out for me; I need all the help I can get and I appreciate her help very much. The takeoff is actually pretty easy, very short roll with all the wind. Just at the end of the runway we start hitting Rotor turbulence. Cindy starts the normal left hand turn and we get hammered, she calls me and decides it's too rough to do much turning. I thank her as I try to hang on and keep the slack line to a minimum. We continued the tow in a zig zag climb with not too much turning. The Rotor is really pounding us now. I have hit the stops on the ailerons and the rudder controls several times. Fortunately my years of aerobatic experience pays off and I'm really not too flustered. The hard part is managing the slack line. I called Cindy and apologize; she says I'm doing great, no problems, just hang in there.



We fly around to the west (windward) side of the Rotor clouds and continue to get hammered, then just like magic we hit the smooth laminar wave and the air is suddenly like glass and the vario is pegged. I release at 7,500 and say good bye to Cindy. Pull the gear up, keep turning into the wind and stay in the lift. Now the Vario is really screaming now.....whoo hoo! It doesn't take too long and I'm approaching 18,000 ft and the bottom of the Class A airspace, I call Joshua

Approach and ask for clearance to FL260 (26,000 ft) in Glider Area 1A. Joshua approach calls back asking me to squawk a frequency, I call back saying that I'm not transponder equipped, Joshua says that I'm to stay below 18,000 ft. Oh man, now I'm totally bummed! I thought we had worked all this out. I try calling Cindy on my hand held radio and see if she can call Joshua center on the phone and straighten things out. I never contact Cindy or got my clearance so I have to stay below 18,000 ft. I drop the gear, pull the spoilers and descend back down. Maybe I can try calling Joshua again later and get a clearance. A little later I try again and give Joshua Approach a call and ask for clearance to FL260, I immediately get a call back and he clears me to FL260. Yes! My climb into the Class A airspace is going great. Things are really looking up now, then the lift tops out at 23,000 ft., I begin flying all around searching for better lift but have no luck. I'm stuck at FL230 and with a release at 7,500 ft I'm way short of Diamond altitude, I keep doing the math in my head but I know I'm short. I need a gain of 16,404 ft and I've only climbed 15,500 ft.



So I then decided to drop the gear pull the spoilers and descend back down lower than 7,500 feet. Wow, this is going to be one hell of a notch on the Barogram. The decent goes pretty smooth, I call Joshua Approach and close my clearance out of Class A airspace, but tell them that I plan to come back in about 30 minutes. They say no problem, call us when you're ready. At one point in my decent I'm finding so much lift I'm climbing even with the gear down and spoilers out full. I note this place on my moving map display (PDA) and fly out of the lift to get down lower. When I get down to about 7,000 ft I hit the Rotor turbulence again and get hammered again, at least I'm not on tow. I go down to just below 6,000 ft still in a lot of turbulence. OK, there's my "notch". I worked the Rotor on the lifting side and have a rough climb up to about 7,500 ft, working my way back to where I had found the lift on my decent. Then it hits and gets real smooth with tons of lift. I point the nose into the wind, slow down to min sink speed



and go to thermal flap setting, the variors are pegged and screaming, I turn them down and start to enjoy the climb. My climb averager is showing about 1,500 feet per minute climb (15 kts), it's so smooth and so serene, ground speed is below 20 kts, just hovering in one spot but going up like mad. Wow, better call Joshua Approach and get my clearance quick, this climb is going very fast. I get my clearance to FL260 again, yeah, this is going to work this time. My climb

continues to go at an incredible rate up to about 20,000 ft, then slows down but I'm still going up. Once I get to about 23,000 ft it slows way down but still going up. I move around and find some better lift. Finally I top out just a hair above 25,000 ft (FL250). I take some photos, man am I up way up here! Got some nice shots of the fantastic view and one of my altimeter and PDA. The canopy starts to freeze up pretty good now, especially on the sides. It's really getting cold, the forecast said it would be about -30°F at this altitude. I decide that this is high enough. At this height I have about 2 minutes of useful consciousness if my oxygen system fails, I better get down now. Drop the gear and pull spoilers again, but I want to go down slowly, don't want to create cracks in my Gel coat. I point the canopy into the sun and the ice begins to melt.



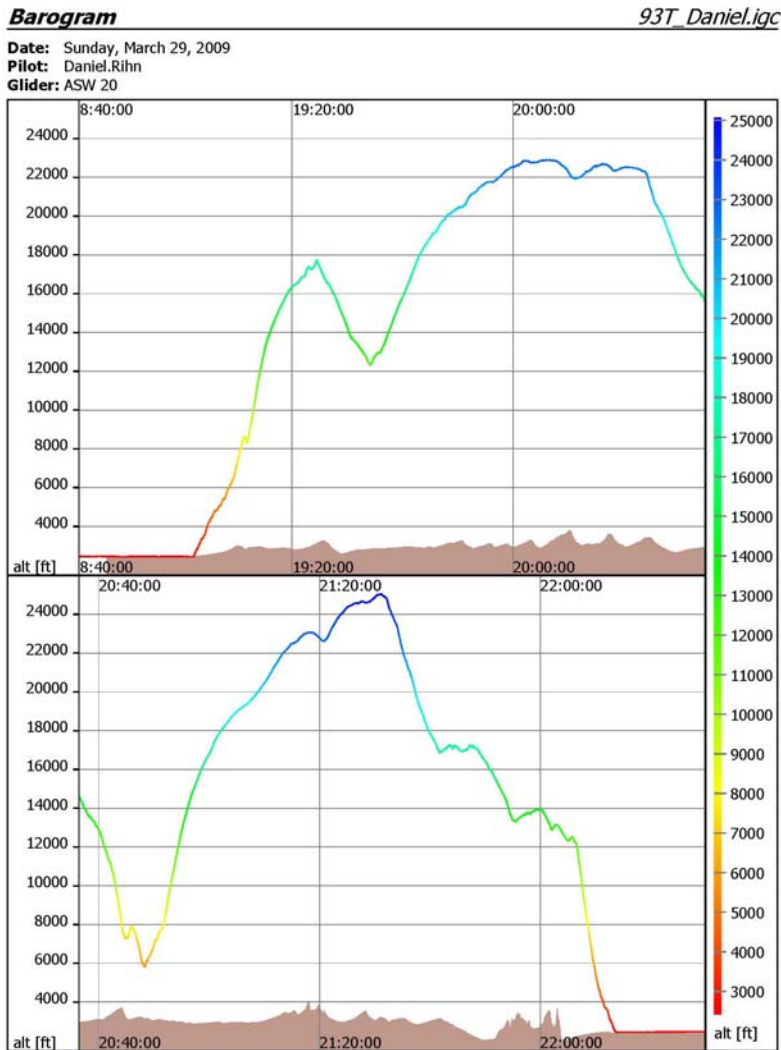
Man, my feet are cold, they had been pretty warm inside my two pairs of ski socks, but now they're freezing. My decent goes well and the canopy gets nice and clear again, I call Joshua approach and close out my clearance, he nicely congratulates me when I mention that I reached FL250. Well now what? Got 18,000 feet on the altimeter why not explore the wave below the Class A airspace, yeah, try some X/C wave and go like world champion Jim Payne! I point the nose north but progress is really slow with the headwind. I'm in lift so I push a little faster, keeping in mind the true airspeed at this altitude and the chance of hitting turbulence again. At best L/D speed my ground speed slows to about 20 mph, so that means about 30 kts of head wind. At this rate I'm not going anywhere fast and my feet are still frozen. I check my watch, I'm coming up on 3 hours of flying, maybe I better call it a day and head back to Cal City, I still have to contend with the Rotor and I can see blowing dust on the desert floor. I turn downwind towards Cal City and my groundspeed immediately jumps over 200 mph, at least my trip back won't take very long. I fly over the Honda Track and start to descend, slow her down, drop the gear, pull in some flap and spoiler. Checking the winds at Cal City, geez,



still howling but mostly straight down the runway. The Rotor begins to beat me up again...not fun. I turn into the pattern and fly in rough air all the way to the ground. My landing isn't the prettiest one I've ever made, my Dad used to call those "arrivals" when he was teaching me how to fly, but it is safe and I quickly come to complete stop. Whew! I made it. I call Cindy on my cell phone and ask her to send out some help.

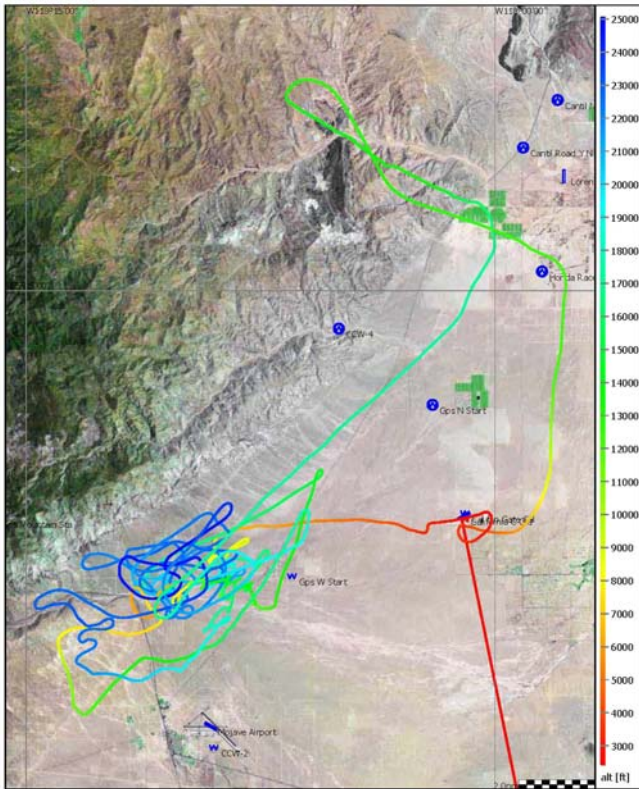
My airspeed indicator is jumping over 20 mph, I stay in the cockpit with my spoilers out full and brake on, riding out the wind. In a few minutes help arrives, Derrick hooks me up to the truck on the tow hook, I stay in the cockpit and with a wing runner we make our way back into the ramp on the lee side of the hangars. We quickly derig WO and take

my Volkslogger over to Caracole. Cindy and Marty download my flight and it looks like I easily have my Diamond altitude and a single “Lennie” award for flying over FL250. Cindy helps me with all the paperwork for the SSA. I decide that I’ve had enough wave flying for this season and hook up the trailer to take WO back home. The drive home goes by in a flash as I continue to relive the flight over and over. Back home I’m dead tired, I kiss my wife, happy to be safe and warm and fall fast asleep.



Summary- They say you can “never go back”, while that may be true you can “finish what you started”.

Date: Sunday, March 29, 2009
Pilot: Daniel.Rihn
Glider: ASW 20



I soloed in gliders on my 14th birthday and always dreamed of owning my own glider and getting all three Diamonds. A little over 40 years later I now have 2 Diamonds, just the 500 km Distance to go! I've read so many stories about serious wave flying and they all sounded so exciting. Well wave flying is exciting but I'm not sure I want to go that high again. Like all badge flights the key is preparation and patience in waiting for your day. You have to not only be prepared for the flight you also have to be prepared to go when it's good weather. I learned a lot in preparation for this flight, I read all I could find but the best help was spending a few hours talking to Cindy and Marty. There is a lot to learn; airspace rules, regulations, wave weather prediction, wave generation, Rotor generation, Lenticular clouds, Rotor clouds, Oxygen systems, glider preparation etc... It was a facinating experience, I'm glad I finally did it. Can't wait to get WO back at Hemet...nice warm Hemet.



PS- Jim Payne flew 1,660 km in the wave the same day....well at least I flew higher!