

Following the first cross-country attempt on April 13th, which was the last flight described in the May issue, we had two days of bad weather, with rain and high winds, which kept the Minimoa in its hangar. Karl Lange is writing a detailed account of these and other meteorological conditions during the expedition, which will appear in a later issue, so I will omit reference to fronts, air masses, and lapse rates, and give simply a running account of what took place.

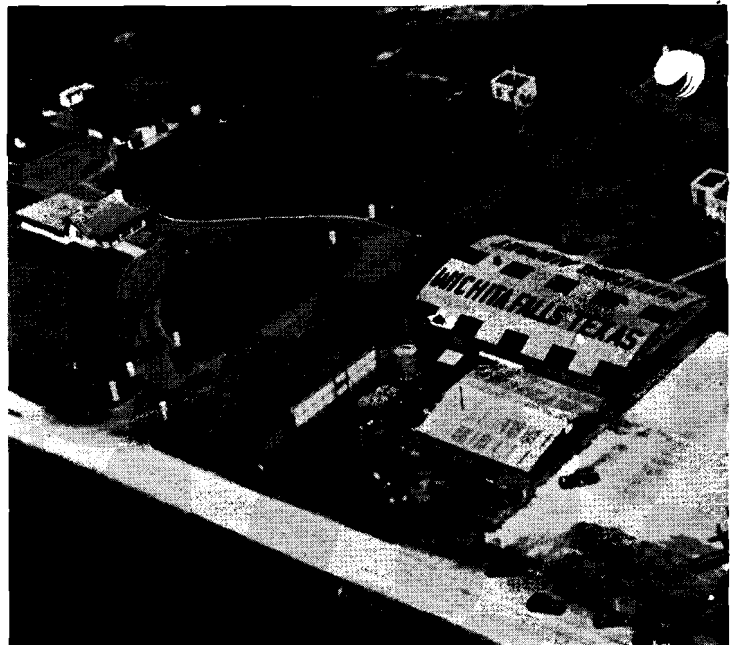
Saturday, the 16th, we had clear, cloudless skies and I made the first winch take-off at 10:45 a.m. into a fresh NW wind. Immediately after releasing at 850 ft., I caught a thermal which showed zero on the variometer and gradually rose to 4 ft./sec. climb as I spiralled carefully up to 2,200 ft. At this altitude the lift slowly gave out and I could see that I was nearly up to the level of the haze line marking a temperature inversion. Gliding gradually down upwind I again caught a thermal when 800 ft. over the same NW corner of the field and climbed in it up to 1,600 ft. Gliding slowly down, I caught another at the center of the field at 1,100 ft. and climbed it at 1-3 ft./sec. to 1,500. Down to 1,000 over the hangars I caught another of the same intensity and rode it up close to the inversion level at 2,200. Down again to 1,000, I caught a weak one (-1 to $+1$ ft./sec.) and hung on to it for 10 min. At 11:55 I landed for lunch, after having been up for 1 hr., 10 min.

At 1:05 I took off again and stayed up 1 hr. and 30 min., on a most interesting flight. Again I caught a thermal on releasing at 800 ft., and climbed it to 2,100 ft. Back down to 1,000 ft. I caught another, which registered up to 6 ft./sec. as I rode it up to 2,600 ft. After several more ups and downs (never below 1,000 ft.), I caught the best thermal of the day and climbed at 13 ft./sec. up to 3,200 ft., where I was again at the haze line. Off to the south I could see one of the convenient black smoke plumes from an oil field fire, and this levelled off at my altitude and, unlike the morning haze line, was gently undulating in a definite wave form.

Several times this afternoon, as on numerous other flights, I found myself spiralling with three or four large chicken hawks, which were also making the wide, shallow turns I had found most efficient in these ample thermal upcurrents. When following them closely, I noticed several times that I had lost the center of best lift. I could do better by paying more attention to my sensitive Horn variometer!

When down to 400 ft., I held my altitude for 3 min. while heading into the wind. After landing at 2:35, Pete and Ken reported a dead calm for the past forty minutes. The temperature was 80° .

Sunday, the 17th, Dr. and Mrs. Karl Lange ended their 2,000 mile drive from Boston at the airport, just in time to see the Minimoa go by overhead, towed behind a Kinner Fleet piloted by Fred Ridenouer. This, the first of five airplane tows made during the expedition, was one of three for exhibition purposes, the latter two being for transportation. All soaring flights were made from winch or auto tow. On this flight I towed over the city and when I released at 3,500 under a



Expedition base of operations. Aerial photograph made while

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by Lewin B. Barringer

solid overcast, I found nothing but smooth, stable air as I slid slowly back to the airport.

Monday, the 18th, the weather was again clear, with a SW breeze of 4 m.p.h. and the temperature at 85° . Of eleven flights, on only one did I fail to contact a thermal. However, they were very weak and my flights averaged no more than 7 minutes, except for one at 1:45, when I caught a thermal of 4 ft./sec., climbed to 1,500 ft. and stayed up 22 min. On the last flight, I carried a radio-meteorograph in the cockpit to test its transmission, which Karl reported good when I landed. As far as we know, this was the first time such an instrument had been carried by a sailplane on a soaring flight.

Tuesday, the 19th, proved the high day of the expedition and is described in some detail elsewhere in this issue. I might mention here, however, the violent electrical storm that arrived at Tulsa that night, after dark, when a cold front moved in from the NW. It rained hard most of the night.

The following morning, Red Kimbrell arrived early with the red Waco F-3 to tow me back, but the take-off was delayed by low ceilings en route to Oklahoma City. We finally took off at eleven o'clock and had a pretty rough flight under the overcast which finally broke up near Oklahoma City, where we began encountering thermals. As we neared the city, a red Wasp Stinson, piloted by Les Bowman, flew by carrying among his passengers Clarence Dale, who kept busy taking pictures of us with his Contax.

Releasing at 5,000 ft. over the skyscrapers, I glided down to the airport, over which I soared a few minutes in and out of small strato-cumulus clouds at 3,000 be-