

A

TORNADO PROJECT SUMMARY SHEET

F=0

ONT

1.	DATE AND TIME	TUE MAY 30, 1978	1250 EST
2.	LOCATION OR PATH (attach map)	VENEY WINGHAM Brussels to VENEY Bluevale	
3.	PATH LENGTH	<input type="checkbox"/> NOT KNOWN <input type="checkbox"/> <1mi; <input type="checkbox"/> 1-4mi; <input type="checkbox"/> 5-10mi; <input type="checkbox"/> 11-50mi; <input type="checkbox"/> LENGTH IF >50mi	0697803
4.	PATH WIDTH	<input type="checkbox"/>	5. TORNADO PART OF SQUALL LINE? <input type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN:
6.	ANY UNUSUAL COLORATION?	<input type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN	
7.	ANY UNUSUAL SOUND?	<input type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN	
8.	IF ANSWER TO 6 OR 7 YES, ELABORATE;		
9.	LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.)	TENNIS BALL SIZED HAIL RADAR TOPS 14 KM	
10.	TOTAL DAMAGE ESTIMATE \$	U	11. TOTAL DEATHS NONE
12.	TOTAL INJURED	NONE	13. TOTAL HOMELESS NONE
14.	LIST ALL REFERENCES WINGHAM ADVANCE TIMES JUNE 7, 1978 p1. BRUSSELS POST JUNE 7, 1978. Telephone investigation by M.J. Newark June 8, 1978 M.J. Newark: The Severe Local Storms of May 30, 1978. Weather Enterprises Report 78:02.		
15.	SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS. (a) cone shaped. black cloud seen aloft at the southern end of the damage track. (b) Barns unroofed or otherwise damaged. Farm equipment tossed around.		

WORKSHEET

IDTO 0697803

① ORIGIN x 17481800
 y 4846500

C 500
 ⑤ Standard Error S_x

② LIFT-OFF x_1 17481700
 y_1 4852300

C 500
 ⑥ Standard Error S_y

③ $(x_1 - x) = 100$

④ $(y - y_1) = 5800$

⑦ DAMAGE LENGTH

$L = [(x_1 - x)^2 + (y - y_1)^2]^{1/2}$ ⑧ $\alpha = \tan^{-1} \frac{|y - y_1|}{|x - x_1|}$

③+④ $\rightarrow r, \theta = 5800 \text{ m}$

$x \leftrightarrow y = 89^\circ$

⑨ Standard Error $S_L = (S_x^2 + S_y^2)^{1/2}$

⑤+⑥ $\rightarrow r, \theta = 707 \text{ C}$

⑩ $\beta = \frac{\tan^{-1} S_L}{L}$

⑦+⑨ $\rightarrow r, \theta$
 $x \leftrightarrow y = 7^\circ$

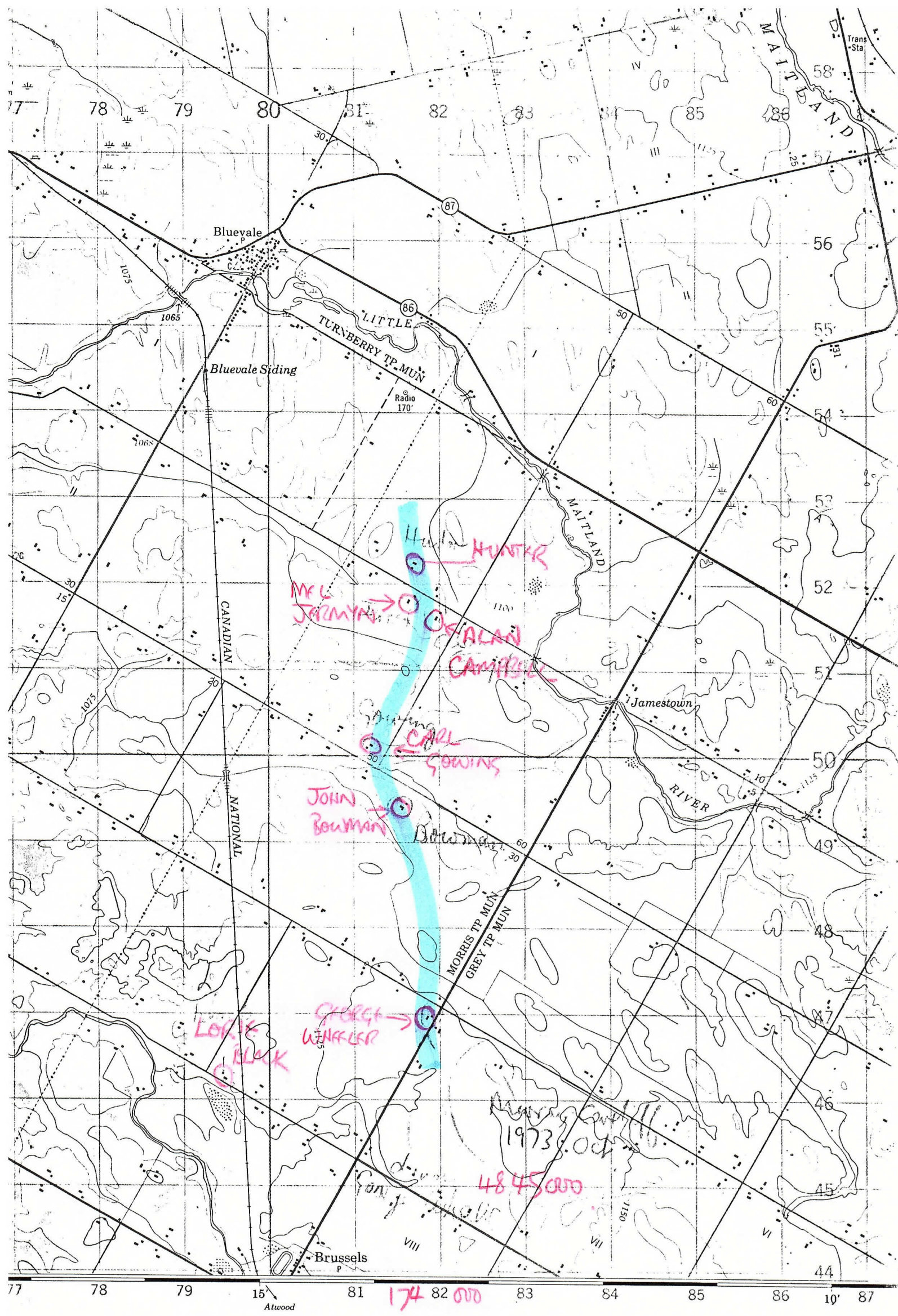
NE Quad $\phi = 90 - \alpha$

SE quad $\phi = 90 + \alpha$

NW Quad $\phi = 270 + \alpha$

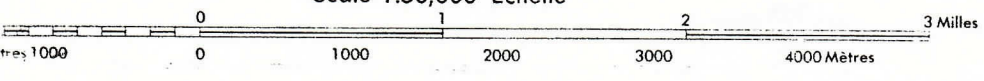
SW quad $\phi = 270 - \alpha$

⑪ $\phi = 179^\circ$

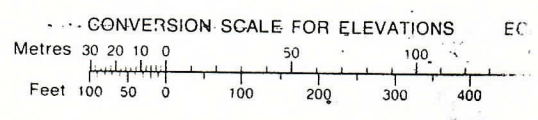


WINGHAM ONTARIO

Scale 1:50,000 Échelle



Information concerning location and precise elevation of bench marks can be obtained by writing to the Geodetic Survey, Surveys and Mapping Branch, Ottawa.



CONTOUR INTERVAL 25 FEET
Elevations in Feet above Mean Sea Level

174 82 000

48 45 000

1973 OCT

Atwood

tres 1000

EC

Telephone Investigation of a tornado near Wingham, Ont
by M.J.Newark on June 8, 1978.

Storm date Tuesday May 30, 1978 . Time 1350EDT.

Place. 2nd and 3rd concessions of Morris township.

Length of tornado path approximately 2miles (3 km).

Width unknown.

Farm of Alan Campbell (519) 887-9451

North side 2nd conc. $1\frac{1}{4}$ mi west of Huron county road #12, $2\frac{1}{2}$ mi south of highway 86. *lot 26*

Storm described as extreme in intensity coming from the SW. Hail 1 inch in diameter. Several barns unroofed and one (not very sound construction) demolished. A 1200lb rack lifted from a wagon and carried 30 feet while the waggon itself carried about 15 feet. *Heard a terrible roar.*

Farm of Mel Jermyn (519) 887-9493

next door neighbour of A Campbell on conc 2. *lot 25*

Trees, crops, and windows damaged by golf-ball sized hail. (The broken windows were on the south side of the house).

Farm of Carl Gowing. (519) 887-9248

South side of conc 2 across from Campbell.

Hail and wind described as having unusual force. Largest hail stones the size of tennis balls. Storm duration 5 or 10 minutes. Limbs and leaves stripped from trees. Clock stopped at 1350 EDT.

Farm of John Bowman (519) 887-6127 *lot 27 or 28*

north side of 3rd conc about $\frac{3}{4}$ mi southeast of the Gowing farm.

Barn partly unroofed and one end taken out. Debris concentrated along the track of the storm for about 100 rods. No damage suffered by neighbours.

Farm of Lorie Black (519) 887-9288

Conc 4 to the southwest of the Bowman farm.

Mr Black and two friends sheltered in a small outbuilding noticed a black funnel shaped cloud at approximately 1330EDT. It was aloft and their farm suffered no damage. At the time of the sighting there

George Wheeler: lot 30 n¹/₂ conc 4 887-6789
Ted Cowan lot 26 n¹/₂ 4

was some very light rain falling. The funnel moved northeastwards fairly quickly and was followed by heavier rain, lightning and $\frac{1}{2}$ inch diameter hail.

Comments.

The concession lines in this township run from NW to SE. Each farmer was questioned carefully about the direction of the storm and it appears to have been moving perpendicularly to the concession lines or from southwest to northeast. None of the farmers questioned knew of any damage north of concession 2 or south of concession 3. Although the noise made by the storm was very loud, nobody reported hearing unusual sounds.

NOT FOR DUPLICATION OR PUBLICATION
WITHOUT THE PERMISSION OF

WEATHER ENTERPRISES
PO BOX 427
BRAMPTON
ONTARIO, L6V 2L4

Rare twister hit here Tuesday

Some residents of the Brussels area got a surprise in the form of a small twister Tuesday which caused major damage on the farm of Jim Bowman of R.R.5, Brussels and minor damage to other farm homes.

The Bowmans probably suffered the most damage with the storm taking the roof off the barn and breaking some beams.

The Bowmans estimated that the damage cost could run over \$7,000 or \$8,000 but added that, "you can't hardly tell how much it's going to cost until you get the bill."

He also said the hail cut about six or eight inches off the alfalfa.

Windows were broken by hail in several homes including those of Ted Cowan and Mel Jermyn and windows in the barn at Carl Gowing's.

Culverts on the road north of Brussels could not handle the

sudden torrential rain and there was considerable flash flooding.

The storm acted not unlike a mini-tornado, touching down here and there.

Brussels escaped damage but had the heavy downpour of rain and an electrical storm while only a short distance away the dust was flying.

Fortunately there have been no reports of injury to anyone.

Mrs. Ted Cowan of R.R.5, Brussels, said it started to rain about 12:45 and then at about 1:25 it started to hail. Mrs. Cowan turned to her husband and said it sounded like the windows were going to break. Sure enough the hail broke all her storm windows which she hadn't taken off yet.

By two o'clock the hail had stopped but it continued to rain and the hailstones weren't melting very fast.

"By six o'clock we were still picking up hailstones the size of alleys," Mrs. Cowan said.

The storm also damaged a good 40 acres of wheat and about 50 acres of corn and the Cowans are just waiting to see whether the two crops are going to come or not.

Mrs. Mel Jermyn of R.R.2 Brussels, said they had doors and windows blown out of the house and she described the hail as being the size of golf balls.

They're not too sure of the crop damage yet but Mrs. Jermyn said the storm had stripped the grass and ruined the strawberry patch.

Alan Campbell had two windows blown off his house and damage to some farm equipment out in the yard which got swung around in the storm.

A barn on Mr. Campbell's other farm which he doesn't use was blown down.

One wagon rack was demolished and a bale elevator was upset over onto another piece of farm machinery. Mr. Campbell said it would be a fair bit of work to replace parts in the machinery but there wasn't too much damage that was going to cost a lot.

Mr. Campbell said that his hay and grain fields were flattened but that the corn wasn't up yet.

"It was really frightening for maybe five to ten minutes, then it was gone, Mr. Campbell said of the strong wind.

Carl Gowing of R.R.2, Bluevale had damage to the windows in his three pig barns and Mrs. Gowing said the strawberry patch was a total loss and that the hay fields were cut right off.

Charles Thomas had some of the roof torn off his barn in Morris Township.

Tony Chir of the Sky Harbor Airport Weather Station in Goderich says a twister is the result of cooler weather coming up against the hot air mass.

The reason for it hitting the Brussels area only could be that twisters are very sporadic in nature according to Mr. Chir.

He said it would have to touch ground to be called a twister and if it took a barn up or ripped the land up then it could be classified as a twister.

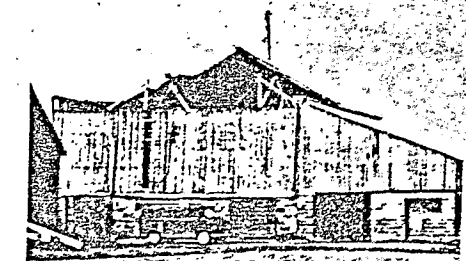
Graham Campbell, weather technician at Sky Harbor Airport weather station made a further

check with the Ontario Weather Centre in Toronto to see if the storm that went through Brussels could actually be classified as a twister.

He said that Michael Newark from the Centre with the description of the damage given to him

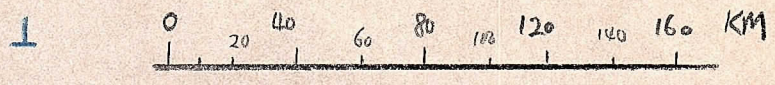
and because it hit only one area he figures that the localized energy meant a twister.

Mr. Campbell said Mr. Newark was surprised to hear about the twister since it was only about the third or fourth reported in Ontario within the last year.

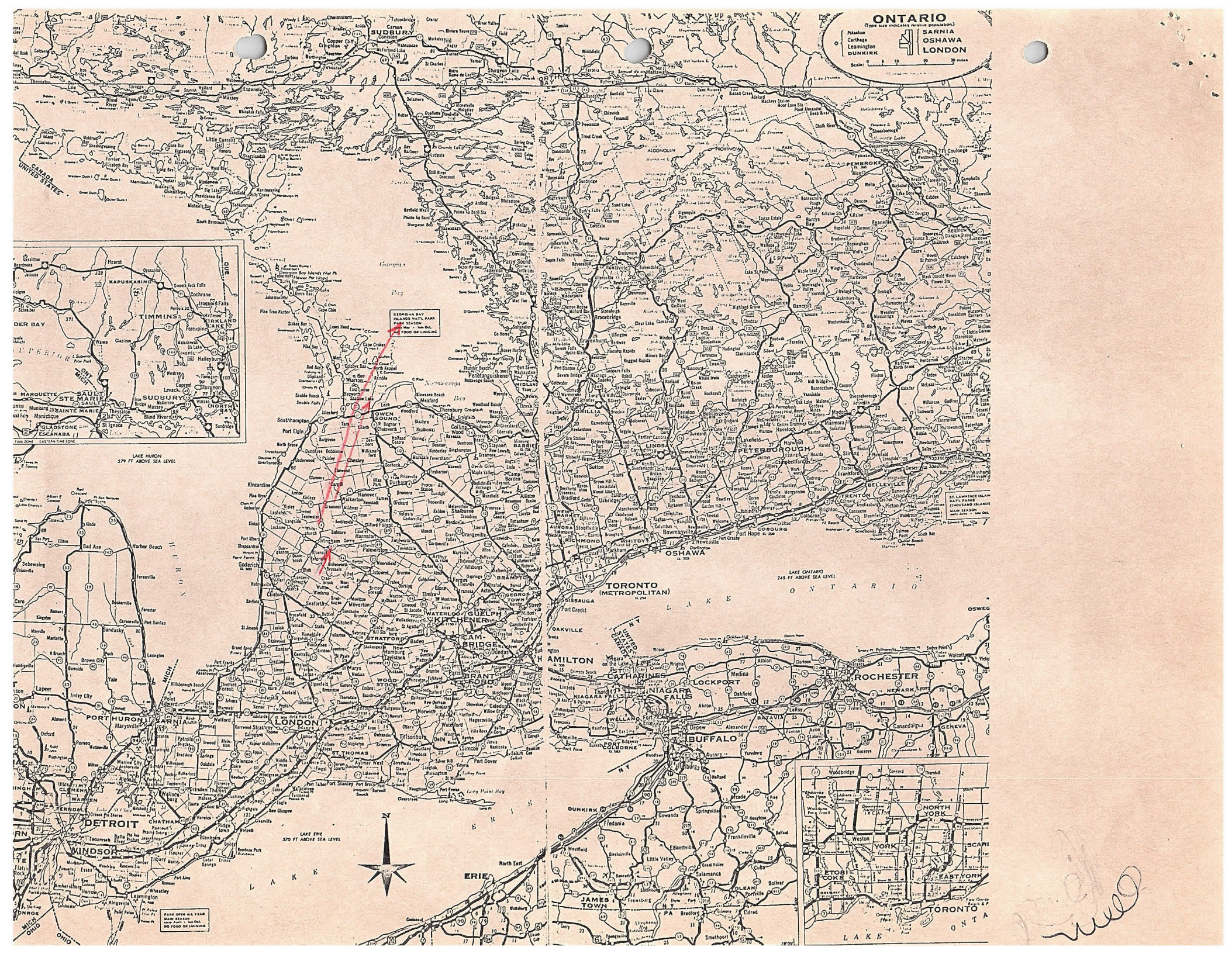


WINDBLOWN — A small twister in the Brussels area took the roof off a barn on a farm owned by Jim Bowman. Mr. Bowman estimated that it could take \$7,000 or \$8,000 to be repaired. The roof was blown 100 rods down the field. (Photo by Langlois)

12 km



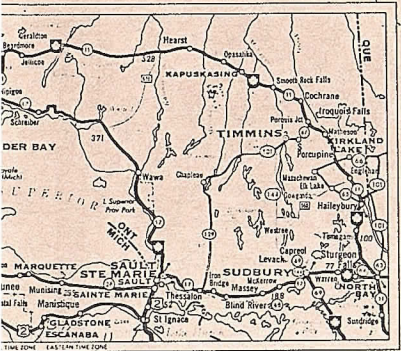
1748	14 KM X	max R	188.4 mm hr ⁻¹ @ 5 km	272/133 km
1807	12 KM X	"	71.8 mm hr ⁻¹ @ 2 km	275/128 km
1827	9 KM X	"	66.8 mm hr ⁻¹ @ 3 km	290/148 km
1904	11 KM X	"	48.7 mm hr ⁻¹ @ 3 km	301/144 km
1924	10 KM X	"	UNK	
1943	11 KM X	"	84.1 mm hr ⁻¹ @ 4 km	314/161 km
2002	11 KM X	"	54.6 mm hr ⁻¹ @ 3 km	321/167 km
2021	11 KM X	"	40.4 mm hr ⁻¹ @ 6 km	322/181 km



ONTARIO
(Type size indicates major population)

Pasaden	BARNIA
Carthage	OSHAWA
Lansdowne	LONDON
DUNKIRK	

Scale: 1" = 20 miles



GEORGIAN BAY
WATER LEVEL
MAIN SEASON
FROM 1000 FT. OF LONDON

LAKE HURON
579 FT. ABOVE SEA LEVEL

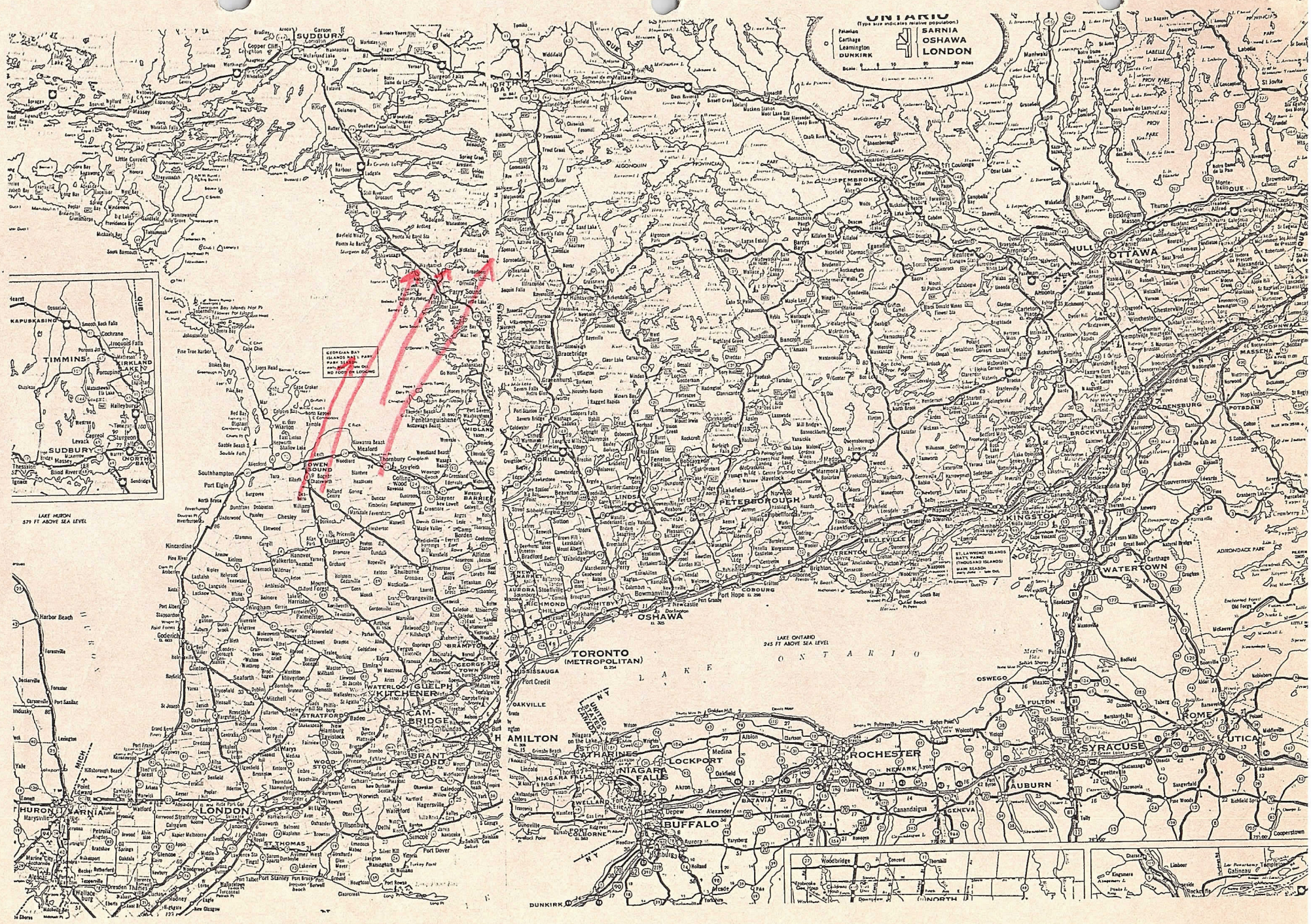
TORONTO
(METROPOLITAN)

LAKE ONTARIO
243 FT. ABOVE SEA LEVEL

LAKE ERIE
570 FT. ABOVE SEA LEVEL



Handwritten signature or scribble.



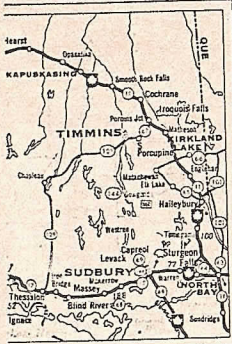
ONTARIO
(Type size indicates relative population)

Hamilton
Carleton Place
Leamington
DUNKIRK

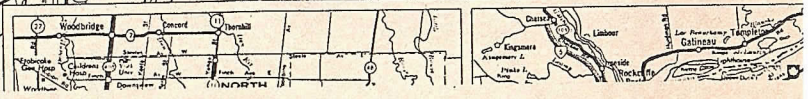
OSHTAWA
LONDON

Scale 0 10 20 miles

GEORGIAN BAY ISLANDS AND PARRY SOUND ARE NOT SHOWN ON THIS MAP

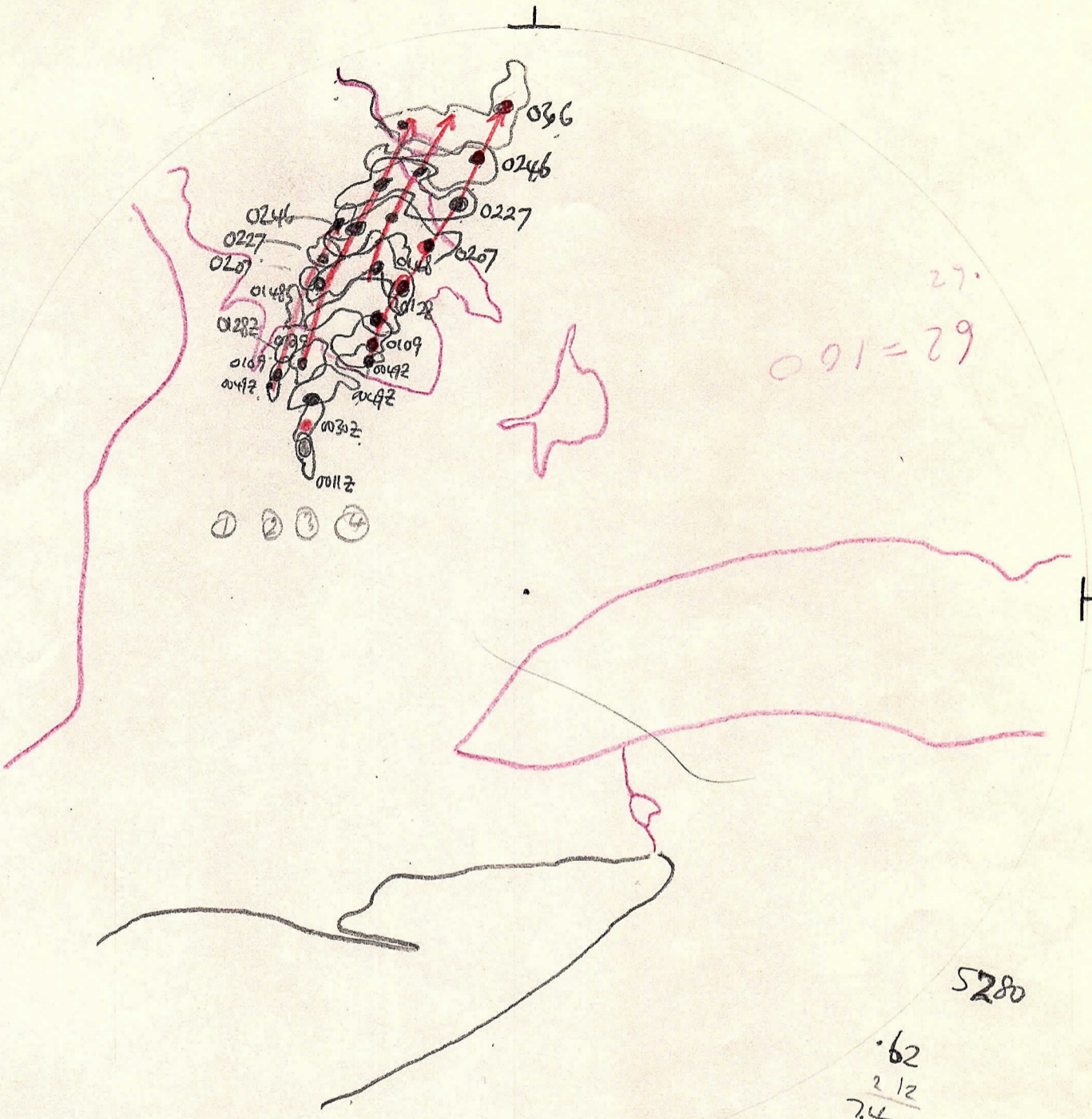


570 FT ABOVE SEA LEVEL



- ① 210/35 km hr⁻¹
- ② 210/50 km hr⁻¹
- ③ 210/50 km hr⁻¹
- ④ 210/50 km hr⁻¹

- ⑤ 65 km
- ⑥ 115 km



27.
62 = 29
001 = 29

- ①
- ②
- ③
- ④

5280

.62
2 12
7.44

1 5280
369600
21120
390720

1.6
3.2
48.0
3.2
512

9 x 5
8

9.45.5
5.6

5.6
250000
30000

3
72 x 5
82
15
7.5
35

MAX WIND	CM	RAIN RATE
00302	11	69 mm/hr
39 TUSD 01092	12	94 mm/hr
01282		84 mm/hr
01482	11	52 mm/hr
02072		33 mm/hr
0246	9	
0306	9	

28 TUSD