A

TORNADO PROJECT SUMMARY SHEET

F=0 ONT

1. DATE AND TIME JULY 18, 1977 1615 EST

2. LOCATION OR PATH (attach map)
DRAYTON 0697711

3. PATH LENGTH ☐ NOT KNOWN ☐ <1mi; ☐ 1-4mi; ☐ 5-10mi; ☐ 11-50mi; ☐ LENGTH IF>50mi

4. PATH WIDTH ☐ 5. TORNADO PART OF SQUALL LINE? ☐ YES; ☐ NO; ☐ UNKNOWN:

6. ANY UNUSUAL COLORATION? ☑ YES; ☐ NO; ☐ UNKNOWN

7. ANY UNUSUAL SOUND? ☑ YES; ☐ NO; ☐ UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE; 6. "Grey-brown funnel"
7. "Could hear the twister coming"

9. LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.) pea sized hail

10. TOTAL DAMAGE ESTIMATE $Thousands 11. TOTAL DEATHS NONE

12. TOTAL INJURED NONE 13. TOTAL HOMELESS NONE

14. LIST ALL REFERENCES

Kitchener Waterloo Record, July 19, 1977
Ontario Weather Centre, Severe Weather Log. July 18, 1977
Field visit and interviews by M.S. Newark. July 19, 1977

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

(a) Alan Cherney of Drayton, returning home, saw the tornado funnel as it crossed the highway ahead of him. It was shaped like an ice-cream cone.

(b) Co-op store unroofed. Large trees uprooted. One ton trailer overturned. Top taken off large silo. Some bricks of downtown store were bulged outwards, and windows blown out into the street.

WORKSHEET

IDTO 0697711

① ORIGIN x 1752605.0
y 484480.0

② LIFT-OFF x_1 1754570.0
y_1 484340.0

③ $(x_1 - x)$ = 1965.0

④ $(y - y_1)$ = 140.0

⑤ Standard Error S_x 50c

⑥ Standard Error S_y 1500 ϕ

⑦ DAMAGE LENGTH

$$L = [(x_1 - x)^2 + (y - y_1)^2]^{1/2}$$

③+④ [→r,θ] = 1970.0

⑧ $\alpha = \tan^{-1} \frac{|y - y_1|}{|x - x_1|}$

[x↔y] = 4°

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

⑤+⑥ [→r,θ] = 1501 ϕ

⑩ $\beta = \frac{\tan^{-1} S_L}{L}$

⑦+⑨ [→r,θ]
[x↔y] = 4°

NE Quad $\phi = 90 - \alpha$
NW Quad $\phi = 270 + \alpha$
SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

⑪ ϕ = 274°

Report of Eyewitness - Alan Cherrey
(a resident of Drayton on his way home).

Mr Cherrey was driving north along highway 6 on the evening of July 18th 1977. Not far from his left turn onto the Alma road he saw a black storm sweeping across the road ahead of him. Outlined against the black background he saw a grey-brown cloud shaped like an ice-cream cone which stretched from the cloud to the ground. He estimated it to be about 3 or 4 miles away and it was moving from his left to his right "very fast, maybe 40 or 50 mph". The funnel was inclined at a 45° angle to the ground, appeared to be rotating and was fatter at the top than at the bottom.

As he was making his left turn onto the Alma road it came on to rain and the wind picked up sharply. Turning on his windshield wipers and concentrating on controling his vehicle he lost sight of the tornado after having viewed it for approximately a minute.