C

TORNADO PROJECT SUMMARY SHEET

F=0

1. DATE AND TIME Aug 5 1980 11:15 AST

2. LOCATION OR PATH (attach map) Ben Eoin NS 0398002

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

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;

9. LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.) hail in vicinity heavy rain visibility down to zero

10. TOTAL DAMAGE ESTIMATE $ U 11. TOTAL DEATHS 0

12. TOTAL INJURED 0 13. TOTAL HOMELESS 0

14. LIST ALL REFERENCES

Memo from O.I.C. Sydney

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

- storm of short duration winds gusted to 45-50 kts for about 5 minutes
- large hail fell with the biggest being 2cm-2.5cm
- witness described "a large cloud with rolling and swirling motion"
- Damage included many trees snapped or uprooted, a 40' lobster boat was beached, fewer boxes blown about

-

WORKSHEET

IDTO 03980-02

(1) ORIGIN x 20.695500

y 5092500

(5) Standard Error S_x

$C = 1000$

(2) LIFT-OFF x_1 20701000

y_1 5097000

(6) Standard Error S_y

$C = 1000$

(3) $(x_1 - x) =$ 5500

(4) $(y - y_1) =$ 4500

(7) DAMAGE LENGTH

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

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

(3)+(4) $\boxed{\rightarrow r,\theta}$ = 7106

$\boxed{x \leftrightarrow y}$ = 39

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

(5)+(6) $\boxed{\rightarrow r,\theta}$ = 1414

(10) $\beta = \dfrac{\tan^{-1} S_L}{L}$

(7)+(9) $\boxed{\rightarrow r,\theta}$

$\boxed{x \leftrightarrow y}$ = 11

NE quad $\phi = 90 - \alpha$

NW quad $\phi = 270 + \alpha$

SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

(11) ϕ = 231

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: MAEWR BEDFORD

FROM / DE: MAEWM SYDNEY

SECURITY-CLASSIFICATION-DE SÉCURITÉ
OUR FILE—N/RÉFÉRENCE
YOUR FILE—V/RÉFÉRENCE
DATE

SUBJECT / OBJET: REPORT ON TORNADO AT BEN EOIN (August 5 1980)

1. Enclosed please find a report from Technician WT Appleby of the Sydney Weather Office.

2. Mr Appleby's report also includes photoggraphs which were taken by him on the day in question.

3. Further to Mr Appleby's report I personally was in the Ben Eoin area at approximately 12.00 pm Local time. Below are listed some of the weather I noticed during the time period 12.oo and 12.30 local time.

12.00 A. Mainly sunny at Ben Eoin light NW to N winds Buildups of TCU and CB'S approx 3mi WNW,N and NE of Ben Eoin.

12.10 B. Sky becomes overcast at Ben Eoin and Became Very Dark Winds almost calm.

12.15 c. Heavy Rain beging to fall winds become extremely strong I would estimate gusting to at least 45 or 50kts.

12.20 D. winds and rain had stopped skies cleared and sun once again came out. Damage at the camp ground was suffered by 3 trailors whose canopies had been left out. Canopies were secured to trailors by 2x1/2 and 2½ x 5/8 boltsand screws. Mountings were torn fron trailors with the conopies and all attachments being thrown up and over the trailer roofs. No hail was observed in the western end of the camp ground however were observed in the eastern section of the camp ground a distance of approximately 1/2mi.

e. At no time did I notic a funnel cloud and I have talked with a good number of the people at the camp ground at that time and no one reported any sigg of a funnel cloud...Most said they were to busy looking for cover from the wind and rain.

f. A 16ft canoe with 3 boys in it overturned during the high winds,the canoe was approximately 100 to 150 ft from shore,there were no injuries and 1 hysterical mother.

12.30 H. Clear/scatterd cld and CB Tops visible to the NE,E and SE.

4. For your information and /or comments

FR DECKER
Officer in Charge
Sydney Weather Office

ENC: SLIDES ✓

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: Mr. F.R. Decker
Officer in Charge
Sydney Weather Office

FROM / DE: W.T. Appleby
Presentation Technician
Sydney Weather Office

SECURITY - CLASSIFICATION - DE SÉCURITÉ:

OUR FILE — N/RÉFÉRENCE:

YOUR FILE — V/RÉFERÉNCE:

DATE: August 15,1980

SUBJECT / OBJET: Tornado at Ben Eoin Cape Breton

1. This report for now is filed incomplete due to damage photographs not yet recieved from photo laboratory.
2. Background information pertaining to weather situation prior to and during the thunderstorm activity recorded at the Sydney Airport August 5,1980:
   a) First indication of developement was when Towering Cumulus(TCU) first appeared over the western horizon at approx. 1430Z.
   b) Discussed weather situation with Shift Supervisor at Bedford at 1435Z. Halifax radar and satelite imagery indicated TCU tops spreading at 18.0 to 20.0 thousand feet. I was advised by Supervisor that there was no immediate concern for Thunderstorm activity based upon the latest radar information, but that the situation would be monitored closely.
   c) Thunderstorm activity first reported by an individual calling from western Cape Breton at 1510Z.
   d) Thunder first hear at the Sydney W.O. at 1525Z accompanied shortly thereafter by RW-. An Air Canada DC-9 landing at Sydney at 1525Z reported a line of Thunderstorms, 24km north of the airport, 160Km in length running in a line from east to west.
   e) TRW+ began at 1547Z. Recieved a call from Mr. G. Harvey advising of TRW+Ain the French Vale area 1555Z. French Vale is approx. 25Km west of the airport and 15Km north of the Ben Eoin area where the Tornado was reported.
   f) By 1625Z Cumulonimbus clouds east of airport moving east. No further thunderstorm activity reported for the remainder of the day. Although sct TRW was reported in the Cape breton area by the Halifax radar throughthe remainder of the afternoon this could not be confirmed as the SDCN1 CYHZ 051545 indicated the height of cloud tops 22.0thsnd "HIER TPS VCNTY YQY BYD RANGE RHI".
3. Recieved a call from CJCB radio station at 1715Z with first report of a Tornado touching down in the Ben Eoin area at the time of the Thunderstorm activity.
4. Recieved a call from a Mr. Gerard in Ben Eoin at 1745Z with a description of an apparent Tornado touchdown in his immediate vicinity. Damage description Mr. Gerard conveyed indicated strongly that his report of a Tornado was accurate.
5. Contacted the Shift Supervisor at Bedford to advise of Tornado repobt at 1815Z.
6. Recieved a call from Mr. J.A. Sutherland requesting possible photo coverage of damage area at 1900Z.
7. I arrived at the Ben Eoin area at 2045Z and interviewed Mr. Gerard and various neighbours and photographed the area in question.

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À
O.I.C.
Sydney Weather Office

FROM / DE
W.T. Appleby

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE — N/RÉFÉRENCE
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DATE

SUBJECT / OBJET Tornado report Page 2.

8. List of reported damage:

a) 50ft x 150ft garden flattened: This was indeed the case. Many plants were uprooted. Extensive hail damage to broad leaf plants in particular. All plants were laying in the same direction.

b) 40ft. Lobster boat beached. By the time that I had arrived the boat had been refloated. By the description I recieved it appears that due to the strong winds the boat had dragged it's anchor and been pushed up on the beach a few feet. No damage was reported other than the inconvenience.

c) Wooden flower boxes thrown from sun deck. Box size approx. 6ftx10inx10in: Boxes were blown from the sundeck height of approx. 15ft a distance of approx. 20ft. Boxes were full of earth and plants and constituted substantial weight. The boxes were not permanently attached to the deck as previously reported.

d) Many trees snapped in two or uprooted. Numerous trees were indeed damaged as reported however the trees were as far as I could tell old and diseased/rotten although the diameters were generally approx. 18in. Trees were broken in random fashion and no distinct pattern was apparent. Also healthy trees only sustained minor damage as few branches were torn away, many leaves however were stripped from the healthy trees.

e) Large hail stones reported. Apparently the hail was sufficient to cover the ground and bring local traffic to a stop. Hail stones were collected by Mr. Gerard and kept in his freezer. The largest observed were approx. 2cm to 2.5cm, spherical in shape however many had elongated spikes around the circumference.

9. Mr. Gerard described the approach of the storm as follows: A large cloud with a rolling and swirling motion first appeared on the northern horizon. As the cloud mass approached Mr. Gerard the water on the lake facing his cabin became very still and glassy. Very quickly thereafter visibility was reduced to a few meters by a heavy rainfall accompanied by large hail stone and a roaring sound to the wind. Rain was forced under the doors and around the windows coming in with great force and soaking furniture and flooring. An outside aluminum door was flung open by the wind and sustained damage however no other damage to the cabin occured.

10. Conclusion: My impressions of the area were that a heavy thunderstorm had done the damage, I could find no conclusive evidence of a Tornado occuring. All damage was due to the hail and high winds primarily, but the damage was in a random manner and I was unable to find any organized swath.

11. Photographs with written descriptions will follow this report at a later date.

W.T. Appleby

Government of Canada / Gouvernement du Canada

MEMORANDUM **NOTE DE SERVICE**

TO / À: Mr. F.R. Decker
Officer in Charge
Sydney Weather Office

FROM / DE: W.T. Appleby

SECURITY-CLASSIFICATION-DE SÉCURITÉ:

OUR FILE—N/RÉFÉRENCE:

YOUR FILE—V/RÉFÉRENCE:

DATE: August 28,1970.

SUBJECT / OBJET: Supplementary to Tornado Report of August 15,1980.

Description of Slide photographs taken at Ben Eoin.

1. Facing east. Garden destroyed by wind/rain and hail.

2. Facing southeast. Garden.

3. Facing southeast. Garden.

4. Facing southeast. Garden.

5. Holes in garden vegetables due to hail stones.

6. Garden, hail and wind damage.

7. Flower box on ground. Thrown by wind from Sundeck(Upper right corner) Point of impact, mound of earth in fron of box.

8. Part of tree snapped off and wedged between two others. Tree laying NW-SE. Travelled a distance of approx. 20ft.

9. Old spruce tree snapped at base. Wood rotten. Leaning south.

10. Dead spruce tree snapped.

11. Dead spruce tree snapped.

12. Top of spruce tree snapped .

13. Lobster boat which had run aground and since been refloated.

14. Lobster boat.

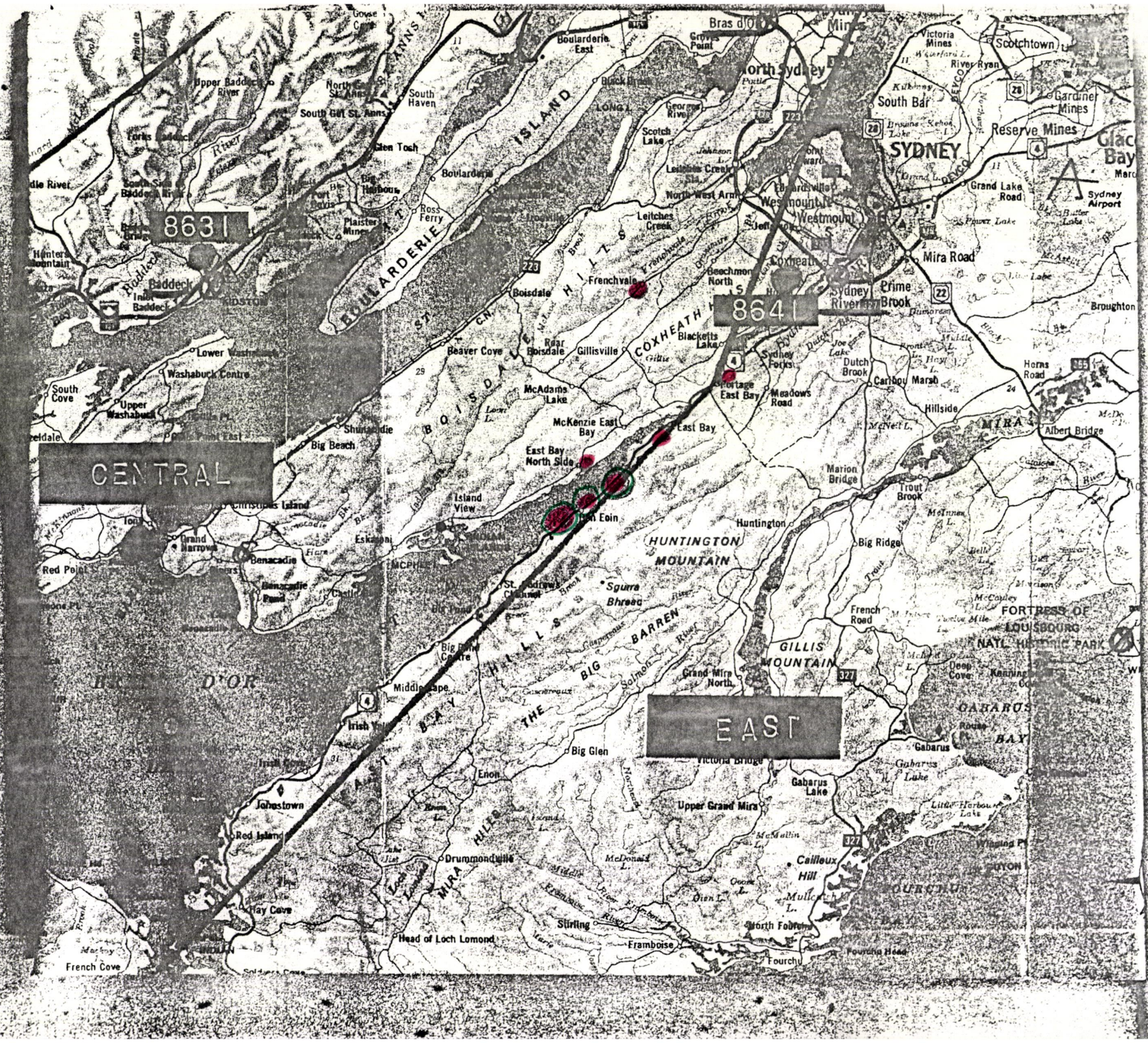
15. Dead spruce tree.
16. Dead spruce tree.

17. Spruce tree from #16. Stump shows on right side of slide.

18. Hailstones collected by cottage owner.

19. 20. 21. 22. Hail stones collected by local residents.

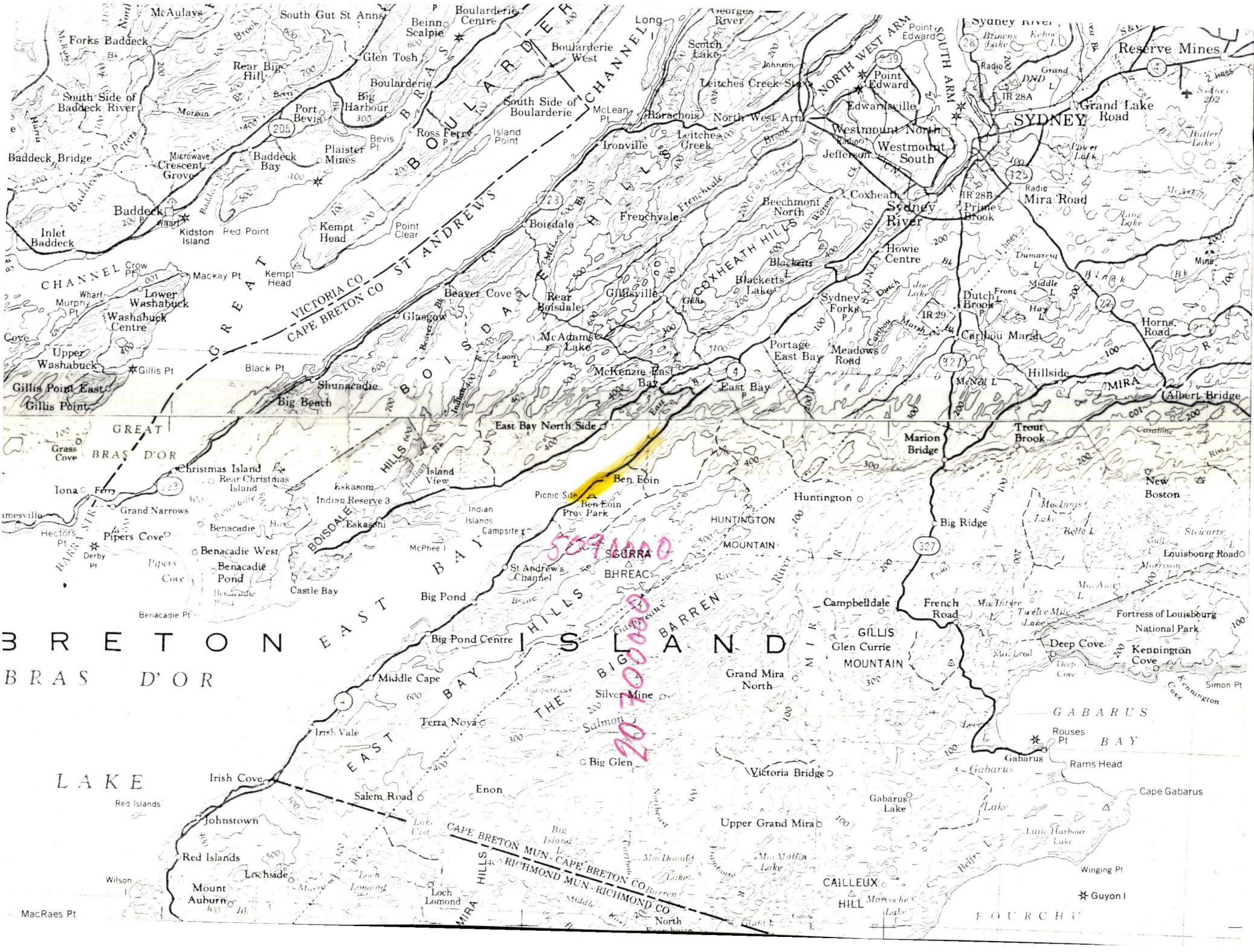
W.T. Appleby



RELIABLE REPORTS OF HAIL (7)

KNOWN WIND DAMAGE (3)
GARDENS
TRAILORS – TORN CANOPIES
TREES BLOWN OVER
(TREES DAMAGED ALL APPEARED DEAD OR DISEASED)

R. DECKER


McAulays
South Gut St Anns
Forks Baddeck
Beinn Scalpie
Boularderie Centre
Boularderie West
Glen Tosh
Rear Big Hill
Boularderie
Big Harbour
Port Bevis
South Side of Boularderie
South Side of Baddeck River
Morgan
Ross Ferry
Island Point
Bevis Pt
Plaister Mines
Baddeck Bridge
Microwave
Crescent Grove
Baddeck Bay
Baddeck
Wharf
Kidston Island
Red Point
Inlet Baddeck
Kempt Head
Point Clear
Crow Pt
Mackay Pt
Kempt Head
Wharf
Murphy Pt
Lower Washabuck
Washabuck Centre
Upper Washabuck
Gillis Pt
Black Pt
Gillis Point East
Gillis Point
Shunacadie
Big Beach
Beaver Cove
Glasgow
Rear Boisdale
Gillisville
McAdams Lake
McKenzie East Bay
East Bay
East Bay North Side
Portage
East Bay
Meadows Road
Sydney Forks
Blacketts
Blacketts Lake
Howie Centre
Beechmont North
Coxheath
Sydney River
Frenchvale
Boisdale
Ironville
Leitches Creek
Barachois
North West Arm
Point Edward
Edwardsville
Westmount North
Westmount South
Jefferson
Scotch Lake
Leitches Creek-Stay
Long I
Georges River
Sydney River
Reserve Mines
Grand Lake Road
SYDNEY
IR 28A
IR 28B
Prime Brook
Radio Mira Road
Dutch Brook
Caribou Marsh
IR 29
Horns Road
Hillside
MIRA
Albert Bridge
Trout Brook
Marion Bridge
Huntington
Big Ridge
New Boston
Louisbourg Road
Fortress of Louisbourg National Park
Deep Cove
Kennington Cove
Simon Pt
Campbelldale
French Road
GILLIS MOUNTAIN
Glen Currie
Grand Mira North
Upper Grand Mira
Victoria Bridge
Gabarus
Gabarus Lake
Rouses Pt
Rams Head
Cape Gabarus
Winging Pt
Guyon I
CAILLEUX HILL
Grass Cove
Christmas Island
Rear Christmas Island
Iona
Ferry
Grand Narrows
Pipers Cove
Benacadie
Benacadie West
Benacadie Pond
Castle Bay
Benacadie Pt
Eskasoni
Indian Reserve 3
Island View
Ben Eoin
Picnic Site
Ben Eoin Prov Park
Indian Islands
Campsite
McPhee I
St Andrew's Channel
SGURRA BHREAC
HUNTINGTON MOUNTAIN
Big Pond
Big Pond Centre
Middle Cape
Terra Nova
Irish Vale
Silver Mine
Salmon R
Big Glen
Irish Cove
Salem Road
Enon
Johnstown
Red Islands
Lochside
Mount Auburn
Loch Lomond
Wilson I
MacRaes Pt
Red Islands
Lake Uist
Big Island L
MacDonald Lake
Mac Mullin Lake
Marcoche Lake
Barren R
Middle R
North Branch
Gaspereaux River
Grand R
Mira R
Baddeck R
Denys R
Bras d'Or Lake
Great Bras d'Or
East Bay
East Bay Hills
Boisdale Hills
Coxheath Hills
Mira Hills
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Loch Lomond
Lake
Gabarus Lake
Little Harbour Lake
Mac Donald Lake
Mac Mullin Lake
Marcoche Lake
Barren R
Middle R
North Branch
Gaspereaux River
Grand R
Mira R
Baddeck R
Denys R
Bras d'Or Lake
Great Bras d'Or
East Bay
East Bay Hills
Boisdale Hills
Coxheath Hills
Mira Hills
Barren Island
Cape Breton Mun - Cape Breton Co
Richmond Mun - Richmond Co
Victoria Co
Cape Breton Co
St Andrews
Channel
Boularderie Channel
Sydney Harbour
Gabarus Bay
Fourchu
Lake