MORE INFO REQD.

A

TORNADO PROJECT SUMMARY SHEET F = 1 NB.

1. DATE AND TIME 14·8·1968. APPROX 6PM (500 AST)

2. LOCATION OR PATH (attach map)
NORTH OF WOODSTOCK, Jacksonville

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

4. PATH WIDTH UNKNOWN 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.) heavy rain

10. TOTAL DAMAGE ESTIMATE $ thousands of dollars 11. TOTAL DEATHS none

12. TOTAL INJURED none 13. TOTAL HOMELESS several

14. LIST ALL REFERENCES

THE BUGLE, WOODSTOCK AUG 22 1968.

Fredricton Gleaner, August 15 & 16 1968

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

(a) referred to as a twister

(b) extensive property damage.

c) visibility a few feet

OBSTRUCTIONS
Canadian Press
Clipping Service

NORTH OF WOODSTOCK
NEW BRUNSWICK

The Bugle,
Woodstock, N.B.
August 22, 1968

WED AUG 14 1968

E1055

Jacksonville Blow:

Weathermen Explain How Storm Formed

HALIFAX, N.S. – The weathermen of the Dep't of Transport in Halifax offered a somewhat complex and even baffling explanation of the storm which ravaged parts of Carleton County last Wednesday, August 14.

The Maritime Weather Office offers little hope of being able to predict such storms in advance, since critical formation happens so quickly. At any rate, here is their explanation.

"Extensive property damage which occurred North of Woodstock on August 14 was caused as a vigorous line of thunderstorms moved across the area from the North-east.

During that day, very warm hazy air covered most of the Maritimes and New England, but much cooler air was pushing south-east across Quebec toward New Brunswick. Along the dividing line, or 'cold front' between the two contrasting air masses, some showers and scattered thunder storms were observed as the cold front drew closer.

Usually a cold front of this pattern crossing New Brunswick is accompanied by some shower or thunder showers of varying degrees of intensity, becoming weaker with time.

In this case, however, near continuous line of severe thunder storms extended by evening in a north east to southwest line from the Gaspe peninsula to Central New England. As the cold front passed the Woodstock area last Wednesday evening, one of these thunderstorms unburdened itself with unaccustomed violence.

SPREADS

In any thunderstorm there exists rapidly moving currents of air which sometimes reach high vertical speeds. These are generated by such factors as an unusually warm landscape, rapid cooling of the air within the thunderstorm cloud caused by evaporation from falling rain drops and the upward displacement of warm, moist, air by the thrust of fresh cool winds.

Most of the turbulent activity is within the cloud itself, but sometimes the violent downward surge or down draft breaks free from the cloud and reaches the earth's surface.

It then spreads outward from the storm overhead to produce sudden squalls which have been known to exceed 75 miles per hour or more.

Compared to some inland sections of North America, the Maritime provinces are almost free of tornados. The pattern of destruction in this case does not resemble typical tornado damage but it could well be that weather conditions over New Brunswick last Wednesday were just short of producing a real tornado. Had such occured, the results might have been even more serious.

Even in the tornado-torn regions of the United States where special warning services have been set up, it is still not possible for weathermen to specify just when or where a severe storm may strike.

In fact, it is still not possible even to predict with assurance that a line of thunderstorms may generate severe squalls. It may be of some consolation to local residents to hear that violence of the type observed last week is very unlikely to strike again in that community.

DEATH OF Woodstock
NEW Brunswick
WED Aug 14 1968

Fredericton Gleaner: August 16 '68
Storm Date: Wednesday August 14 '68

tornado

Clean-Up Begins After Twister Hits Jacksonville

WOODSTOCK — Citizens of the small community of Jacksonville, two miles north of Woodstock, pitched in Thursday to help neighbours clear the debris left by a sudden twister which struck the community early Wednesday evening.

The scene on Thursday morning was one of twisted trees, collapsed barns and sheds, and potato and grain fields flattened by the force of the wind. In all, nine large barns were levelled, at least four houses in the area were heavily damaged, and hundreds of trees in a three mile radius were torn from the ground or broken into pieces.

Chain saws were in use at several homes where trees or branches crashed into the front of the houses, breaking windows and doors, and in some cases there is enough wood on hand for winter use.

Debris from the barns and garages which virtually disappeared Wednesday night, were found several hundred yards down in fields on Thursday morning, and a house occupied by one resident of the community which left its foundation completely during the height of the storm, was found demolished in a nearby field.

At one farm, owned by Jock Fraser, only piles of potato barrels are all that remain of a set of barns which collapsed in the wind.

Still no estimate of damage is available in the entire area, but patch-up work Thursday put most of the houses back into shape. Now, however, with the potato harvest coming on quickly, several farmers will be lacking barn facilities for potatoes or equipment.

Fredricton Gleaner: August 15 '68
Storm Date: Wednesday August 14 '68

tornado

Extensive Crop Damage

Woodstock Area Hit By Violent Storm

WOODSTOCK (Special) — It will be days before the total assessment of damage is compiled following a sudden twister which cut a three-mile swath of destruction Wednesday evening, just north of Woodstock.

There were no reports of serious injuries to any of the people involved in the sudden wind storm, at approximately 8 p.m., but scores of buildings, barns, sheds and houses were either blown to pieces by the force of the wind, or received serious damage in the Jacksonville area, a small community, two miles from Woodstock.

The storm, preceded by a heavy rain, swept into the Jacksonville area, taking trees and buildings in its path, and leaving thousands of dollars damage in its wake. As night fell, New Brunswick Electric Power Commission work crews were busy restoring power to the community, after the wind tore three large transformers off their poles.

Most seriously damaged were homes in a half-mile strip of the Jacksonville road, but reports of barns and uprooted trees trickled in from many outlying areas as well. The storm continued up river, where high winds were reported, but nothing as serious as the twister which centred on the Jacksonville community.

In all, some eight barns or potato sheds were completely destroyed, sheds and outbuildings were torn from another four houses, and trees tore large holes in roofs of houses near the centre of the strike. A house owned by Jocko Fraser was speared by a large tree which also damaged the family car, in the yard. Mr. Fraser's large barn was ripped from its foundation and spread over his field, and a big truck in the barn was damaged.

A house next door, occupied by James Fraser, received the full force of the wind as well, but damage was limited to a few broken windows. Barns owned by Hugh MacFarlane, Ernest Culberson, McCains, Alvin Keenan, Hugh Tompkins,

(See STORM Page 2)

(Continued from Page 1)

and Fred Carr, were all destroyed, although contents of most of the buildings were considered small, and only a small amount of machinery was damaged.

A tree in front of a house occupied by Fred Carr, snapped off and crushed the centre of the house, driving the flue and chimney into the basement. A shed adjoining the house disappeared. Branches from trees hundreds of yards away, flew like arrows against many of the houses, breaking windows and porches.

BLEW TO PIECES

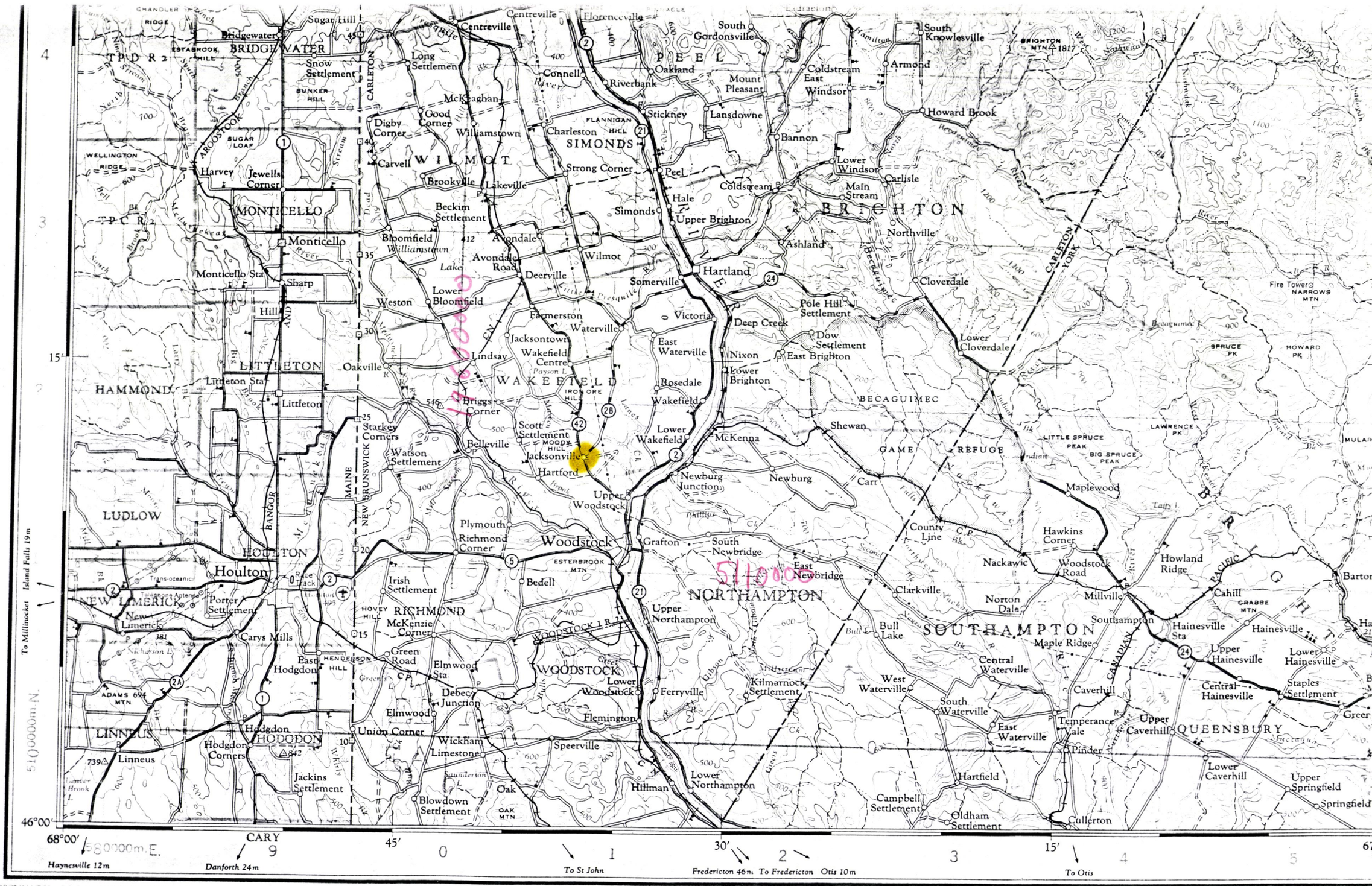
A small frame building, occupied by Mr. and Mrs. Paul Scott, was rocked from its foundation, and blew to pieces in the adjacent field. Their personal belongings were strewn for hundreds of feet. By 7 p.m., reports of the strike were circling Woodstock, and a steady stream of traffic to the Jacksonville area continued into the evening, until RCMP had to advise motorists to stay away, to allow the Power Commission room to restore power to the community.

Miraculously, no one was reported hurt, although many of the citizens thought for a time that their homes would crumble over them. One farmer in the area estimated it only took half a minute for the entire twister to pass, and when it went by his house, he said his vision was limited to just a few feet because of the sheets of rain blowing past him. His home received little damage, but the top was blown off a big white pine at the front of the house and spread branches over most of the property.

Uprooted trees and branches covered a three mile area, which included the Connell Road, just west of the Woodstock town limits. One report from there told of a house trailer in the yard being torn to shreds and disappearing into the back field. At another house, big cement blocks were thrown against the verandah, causing damage.

The high wind also took its toll in Woodstock, knocking down branches and trees. A small girl, daughter of Mr. and Mrs. Jack Forbes of Woodstock was flipped into the air by a large elm branch which the wind tore off the tree, but she received only a few scratches and a scare. Motorists in the path of the high wind reported they had to stop their vehicles because visibility was zero, and one motorist told of feeling the back end of his car lift into the air when the wind struck.

While Power Commission personnel make repairs to broken lines and transformers, and residents of the Jacksonville area begin to clean up after the storm, full estimate of damage is still vague, but will run into thousands of dollars. The path of destruction remains as a reminder that the weather plays funny games, and for residents of the community of Jacksonville, their "half minute of terror" will be remembered for a long while.



THE DECLINATION OF THE COMPASS NEEDLE 19

WORKSHEET

IDTO 04968-01

① ORIGIN x 19607000

y 5116500

⑤ Standard Error S_x

0 = 1000

② LIFT-OFF x_1

y_1

⑥ Standard Error S_y

③ $(x_1 - x)$ =

④ $(y - y_1)$ =

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 [→ r, θ] =

[x ↔ y] =

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

⑤+⑥ [→ r, θ] =

⑩ $\beta = \dfrac{\tan^{-1} S_L}{L}$

⑦+⑨ [→ r, θ]

[x ↔ y] =

NE Quad $\phi = 90 - \alpha$

NW Quad $\phi = 270 + \alpha$

SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

⑪ ϕ =