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# THE 1925 CHARLEVOIS, QUÉBEC EARTHQUAKE: RE-EVALUATION OF THE CANADIAN INTENSITY DATA USING THE MODIFIED MERCALLI SCALE

**Mary G. Cajka**

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# THE 1925 CHARLEVOIX, QUÉBEC EARTHQUAKE: RE-EVALUATION OF THE CANADIAN INTENSITY DATA USING THE MODIFIED MERCALLI SCALE

**BY**

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## Abstract

On March 1, 1925 at 02:19 UT (February 28 at 21:19 EST), an earthquake estimated by modern calculations to be about magnitude 6.5 $m_b$ (Bent, 1992) occurred in the northeast portion of the Charlevoix Seismic Zone (Stevens, 1980). It was widely felt, and an intensity study was conducted in both Canada and the United States. Results were amalgamated, although the final map wasn't published until 1962. Unfortunately, somewhere along the line, an error was made (and later compounded) stating the intensity values as Modified Mercalli (MM) when in fact they were Rossi-Forel. For the sake of clarification, it was decided to re-evaluate the original Canadian data using the MM scale. Although the original American data were missing, the converted MM values were forwarded and are included in the revised map. All of the more dramatic effects occurred in a narrow belt of deep soil about 30 km long covering both shores of the St. Lawrence River, and in areas of unstable terrain more distant from the epicenter. The resulting map shows a reasonable distribution of values, with a felt area consistent with what would be expected for an event of this magnitude. Population distribution, and underlying terrain are two of the major factors influencing felt effects.



## Résumé

Le 1er mars 1925 à 02:19 H.U. (28 février à 21:19 H.N.E.), un tremblement de terre estimé par des méthodes modernes à magnitude 6,5 $m_b$ (Bent, 1992) s'est produit dans la portion nord-est de la zone séismique de Charlevoix (Stevens, 1980). On l'a largement ressenti, et une étude d'intensité a été entreprise au Canada et aux Etats-Unis. Les résultats ont été fusionnés, bien que la carte finale n'ait pas été publiée qu'en 1962. Malheureusement, une erreur fut faite quelque part (et reprise plus tard) énonçant que les intensités étaient sur l'échelle Mercalli Modifié (MM) alors qu'elles étaient en fait d'après Rossi-Forel. Pour clarifier, on a décidé de réévaluer les données canadiennes originales en utilisant l'échelle MM. Bien que les données américaines manquent, les valeurs MM converties furent incluses dans la nouvelle carte. Les effets les plus importants se sont produits dans une bande étroite de sol épais d'environ 30 kilomètre de longueur sur les deux rives du fleuve St-Laurent, et dans des zones de terrain instables plus éloignés de l'épicentre. La carte résultante montre une distribution acceptable des données, avec une zone où le séisme fut ressenti en accord avec un événement de cette magnitude. La distribution de la population et les types de terrain sont deux des facteurs principaux influençant les isoséistes.

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# THE 1925 CHARLEVOIX, QUÉBEC EARTHQUAKE: RE-EVALUATION OF THE CANADIAN INTENSITY DATA USING THE MODIFIED MERCALLI SCALE

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## INTRODUCTION

On March 1, 1925 at 02:19 UT (February 28 at 21:19 EST), an earthquake estimated by modern calculations to be about magnitude $m_b$ 6.5, $\boldsymbol{M}_W$ 6.2, $\boldsymbol{M}_s$ 6.2 (Bent, 1992) and approximately $m_{blg}$ 6.7 occurred in the northeast portion of the Charlevoix Seismic Zone, approximately 150 km downriver from Quebec City (Stevens, 1980). The earthquake is believed to have occurred at an estimated depth of 10 km and was characterized by a large number of aftershocks, many of which were felt but none of which were located or caused damage. The main shock was reported felt to a distance of 1400 km, including all of southern Ontario, the Maritime Provinces, and the United States as far south as North Carolina and as far west at Iowa. All of the more dramatic effects occurred in a narrow belt of deep soil about 30 km long covering both shores of the St. Lawrence River, and in areas of thick sediment more distant from the epicenter.

Following the establishment of the epicenter for what will be hereafter referred to as the Charlevoix earthquake, numerous requests for information regarding felt effects were sent out in both Canada and the United States. (Historically, this earthquake has also been referred to as the St. Lawrence or La Malbaie earthquake of 1925). The English version of the questionnaire used by Canadian officials is reproduced in Appendix A. Replies were analyzed in the two respective countries using the Rossi-Forel scale (Appendix B). Results compiled by the United States Coast and Geodetic Survey were forwarded to Ernest A. Hodgson of the Seismology Division of the Dominion Observatory in Ottawa where all results were consolidated. Hodgson never published an isoseismal map; his intensity findings went unpublished until W.E.T. Smith (1962) plotted the results and contoured the values in the isoseismal map shown in Figure 1A. Unfortunately Smith incorrectly identified the isoseismal intensity zone values as being Modified Mercalli Intensity Scale values, when in fact they were Rossi-Forel. In addition, the acute bending of the isoseismal lines and the anomalous high values, particularly off the east coast of the United States, are questionable. Consequently, a total re-evaluation of all original data using the Modified Mercalli Intensity Scale (Appendix C) was undertaken. An updated isoseismal map should help resolve the anomalies of the original map and also provide a useful means of comparing intensity distribution of the Charlevoix earthquake with more recent earthquakes.

This report re-examines all original Canadian intensity data collected, and re-evaluates them with respect to the Modified Mercalli (MM) scale. The original American data, unfortunately, are not available. However, a file containing the converted values was forwarded to Ottawa and has been used, unedited, to plot values and contour isoseismal zones. A table of MM intensity values for all Canadian communities is listed in Appendix D, and the U.S. data (converted) is given in Appendix E. Photographs of damage are reproduced in Figures 3 through 7, and the derived isoseismal maps are plotted in Figures 8 and 9.

The definitive report documenting the felt effects and damages from this earthquake, and the methodology used in the original assessment of Canadian intensities can be found in Ernest A. Hodgson's meticulously researched "The Saint Lawrence Earthquake, March 1, 1925" in *Publications of the Dominion Observatory*, Vol. 7., No. 10. (1950).

## RATIONALE FOR RE-ASSESSMENT

Intensity maps are important in the assessment of seismic hazard. The correlation between felt and instrumentally determined magnitude, established by the study of modern earthquakes, is used to estimate the magnitude of historic earthquakes. Also, these maps provide an illustration of the significant effects of underlying terrain and geological structures on intensity distribution. For this reason it is essential that tools used to assign intensity effects be the same or at least consistent. It followed that in order to get a more meaningful comparison of felt effects of the 1925 Charlevoix earthquake as compared to more modern ones, it was necessary to re-evaluate the felt reports for this earthquake using the scale most-used to-day, the Modified Mercalli Intensity Scale. It is important to remember that the Charlevoix Seismic Zone is one of the most active seismic zones in Canada and is believed to have been the source of at least four large damaging earthquakes in the past (Smith, 1962). This report contains a full description of the methodology and results from this re-evaluation; it is in no way meant to be a full description of the effects reported.

### (A) Problems with the Rossi-Forel Scale

The Rossi-Forel Scale of Earthquake Intensity (Davison, 1921), was first published in 1883. It divides felt effects into ten degrees of intensity. About the time of the Charlevoix earthquake, the scale was being called into question because it was too brief, divided intensity ranges unevenly and inadequately, and took no note of effects in modern buildings, motor cars or trucks. In addition, the scale did not distinguish between poorly built and well-built structures (Wood and Neumann, 1931). The scale was supplanted by the Modified Mercalli Intensity Scale of 1931 (MM), a twelve-category scale used widely to-day. It should be noted that the MM scale is subject to shortcomings of its own, - too many overlapping effects and too few discrete categories for example - but until such time as a better scale is devised, it is the tool of choice.

**(B) Original isoseismal map**

For political reasons, publication of Ernest Hodgson's definitive report on this earthquake was delayed until 1950, although it had been completed in 1930 (Hodgson, J., 1989, p 179). In the interim, a number of scientific papers on different aspects of the earthquake were published by Hodgson in various contemporary journals, but at no time was an isoseismal map included in any these. This omission is puzzling since the procedure used to plot the values was fully described in his final report, and data collected and published in the United States (Figure 1B, Heck, 1925), had been forwarded to Hodgson for inclusion in such a project. Hodgson, a highly respected scientist, had little faith in information collected by these types of observer reports and had little respect for any intensity scale (Hodgson, 1950, p. 411), so possibly he was reluctant to associate his name with any conclusions reached using this method. The fact that Heck's data had been previously published in the United States probably relieved pressure from that direction. It seems unlikely that Hodgson, a meticulous researcher, would be guilty of a serious omission of this nature; more likely it was a calculated decision. However, this premise is speculation on my part.

Whatever the reason, it was not until 1966 that the intensity data was finally compiled and published by W.E.T. Smith in his catalogue *Earthquakes of eastern Canada and adjacent areas 1928 - 1959* published by the Dominion Observatory in Ottawa. Since the Charlevoix earthquake (1925) is outside the time frame of this particular catalogue, the figure was included as an appendix. Nowhere in this catalogue did Smith make reference to the Rossi-Forel scale; all references are to the MM scale. In fact he stated specifically, "The isoseismals on the maps are drawn to separate areas of differing intensity on the modified Mercalli intensity scale ". However, there is solid evidence to support the supposition that Smith inadvertently included the Charlevoix isoseismal in this statement when in fact, the statement pertained only to the maps from the period of the catalogue.

Certainly, Hodgson used the Rossi-Forel scale to assess intensity values for the Charlevoix earthquake. The MM scale was not even published until 1931; in addition, Hodgson made specific reference to the Rossi-Forel scale. However, if one carefully examines the first isoseismal map in Smith's catalogue (1928 - 1959):- the 1929 Grand Banks earthquake (M7.2), some troubling inconsistencies can be detected. Doxee, (1948) published the original isoseismal map for this event (in fact believed to be the first isoseismal map published in Canada) using the Rossi-Forel scale. By comparing the two maps, we can see that Smith has copied the original intensity zones exactly but converted the zone values to the MM scale. Actually this procedure is lacking in proper scientific method as the Rossi-Forel zones were traditionally delineated by *joining* the communities of similar value rather than *enclosing* them as done with the MM scale. Smith notes on his map that it is adapted from Doxee's earlier work. There is no mention of re-assessing the original reports, so we can assume Smith used a conversion scale of some sort. Support for this supposition can be found in his earlier catalogue (1534 - 1927) where he

makes reference to the fact that it is possible to transform intensities from older scales to newer ones. It must be remembered that instrumental data was in its infancy and the intensity was still one of the most important measure of determining the magnitude and location of any earthquake. Smith always gave a maximum intensity with his early (non-instrumental) locations and it was this application of the intensity scale rather than isoseismal studies that appeared to be of more importance to him. He assigned a maximum intensity of IX to the Charlevoix earthquake but since this could relate to either scale, it does not help to clarify which scale he used.

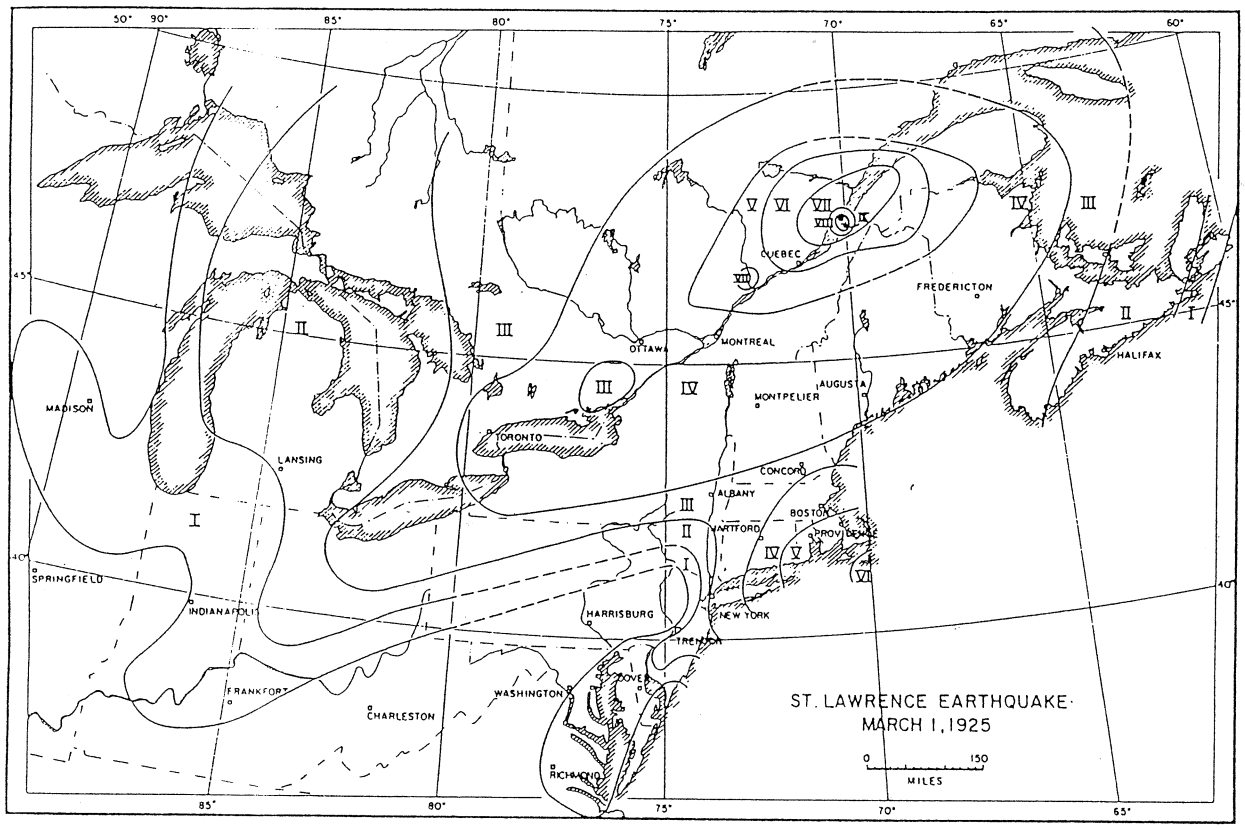


Figure 1A. 1925 Charlevoix original isoseismal map published by W.E.T. Smith (1966) in his catalogue *Earthquakes of eastern Canada and adjacent areas 1928-1959.*

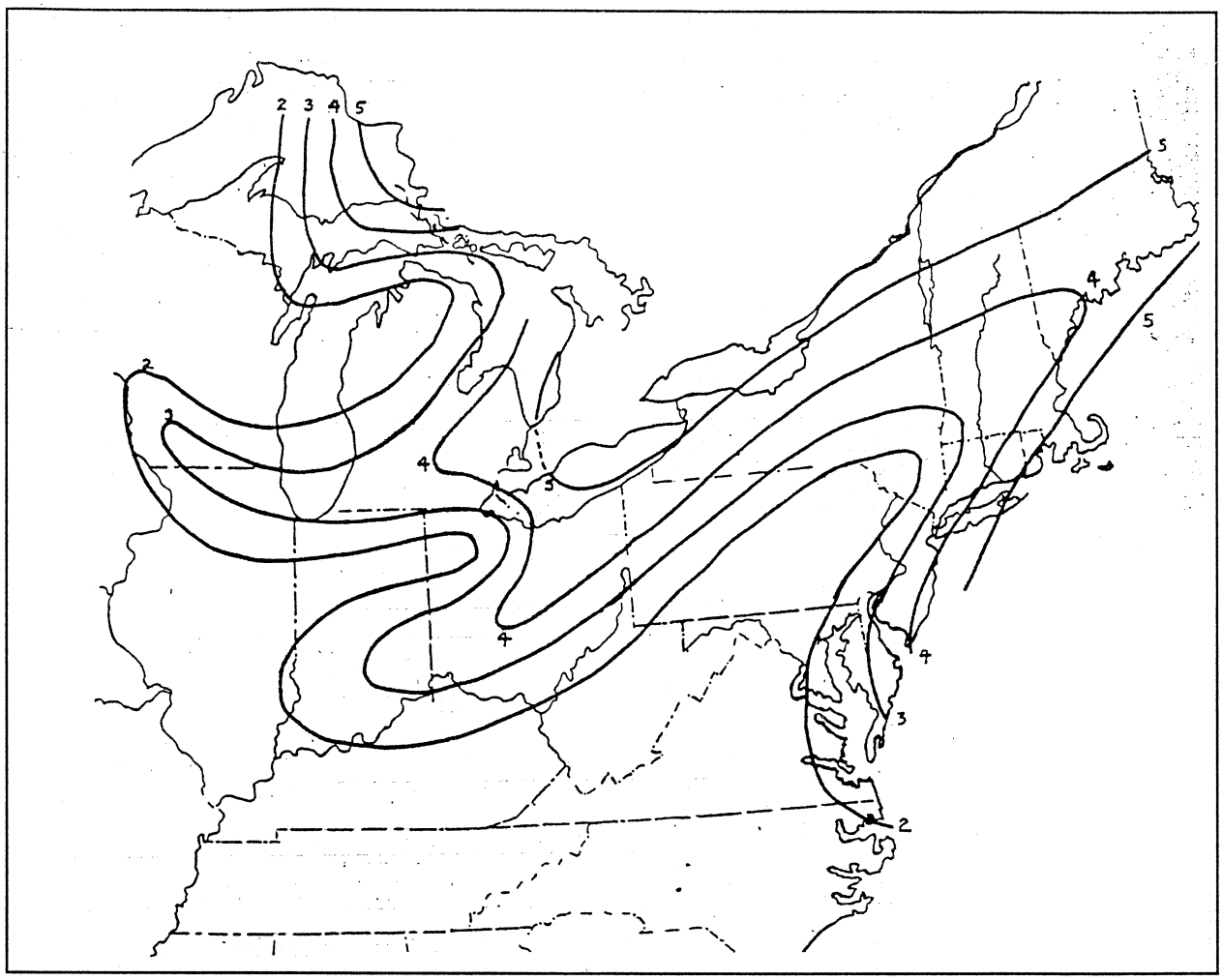


Figure 1B. Provisional isoseismal map of American data for Charlevoix 1925 earthquake. (Heck, 1925).

The isoseismal map published for the 1925 earthquake makes no mention of source of data other than to note that American data is courtesy of the United States Coast and Geodetic Survey. Smith did not say it was adapted from Hodgson as he did for Doxee's work. In his detailed description of the 1925 earthquake, (previous catalogue) Smith (1962) acknowledges the extensive use made of Hodgson's writings on the subject. In fact he used much of Hodgson's text verbatim. So it is safe to assume that Smith used Hodgson's intensity findings. The question is, did Smith convert the values as it appears he did for the 1929 Grand Banks earthquake. The only reasonable answer to this is no. The intensity data originally published by Heck is drawn exactly the same, including values and zones. It seems highly unlikely that Smith converted the Canadian values but did not do so for the American. It is possible, even probable, that Hodgson himself was author

of the map as we know from his report he did produce one. We will never know for sure, but as mentioned earlier, the fact the Rossi-Forel zones were drawn by joining communities of equal intensity would largely explain the sharply bending contours separating isoseismal zones on the original map.

Thus we can conclude that Smith made an unfortunate oversight in including the Charlevoix 1925 isoseismal map when describing the isoseismal maps in the introduction to the 1928 - 1959 catalogue. It is doubly unfortunate that the earlier catalogue 1534 - 1927 was subsequently reprinted and the Charlevoix isoseismal map included in it, along with the misleading information from the later catalogue. The re-examination of all original data, the reassessment on the Modified Mercalli Scale, and the documentation of each community intensity, should clarify the misconceptions and ambiguity associated with the original map.

## DATA

### (A) Sources

The primary source of intensity data used in this re-evaluation is the collection of original documents preserved by the Seismology Section of the Geological Survey of Canada. Approximately 220 questionnaires (see example Appendix A) had been sent to diverse points in eastern Canada for filling out by "postmasters and others". Approximately 148 were returned. Another 226 requests had been sent to editors of newspapers in eastern Canada asking for clippings related to the event. Response was excellent, yielding over 600 articles. It was found that the newspaper clippings, carefully sorted alphabetically, and pasted into three large scrapbooks, were in excellent shape, as were the original questionnaires. The third source was the personal observations recorded by Hodgson on his field trip following the earthquake and documented in his report (Hodgson, 1950). No file summarizing communities and their assigned intensity value was ever found. Neither was there an attempt made to expand the search to possibly undocumented sources, as the research by Hodgson is considered complete and comprehensive. Almost all intensity values assigned at the upper levels (VI -VIII) were based on Hodgson's report and his personal observations. Mid-range values and lower were based on all sources, with newspaper providing good coverage of the more distant communities not visited by Hodgson.

The only original data from the United States in these archives were a few newspaper articles from major cities. Since the US dataset is fragmentary, it was necessary to limit the re-evaluation to Canadian sources. Although the converted values from the United States are readily available (and included for purposes of completeness), unfortunately the original data seems to be missing (personal communication, Jim Dewey, USGS). It is not clear how the conversion from the original Rossi-Forel values to MM was done, but it is assumed the equivalent Rossi-Forel values noted on the Mercalli scale were converted in some standard manner. So until such time as some energetic researcher

undertakes a comprehensive newspaper search of felt reports in the United States, (or makes an exhaustive and possibly futile attempt to unearth the original reports), evaluation of the American data must be viewed with some caution.

### (B) Quality

Modern day intensity assessments rely heavily on sheer number of responses, hoping to negate the anomalous, invalid or frivolous replies invariably received as part of any intensity survey. Seventy-five years ago, scientists did not have this luxury as communication methods were not as rapid, reliable or readily available as in the electronic age. It was therefore not surprising that early assessment methods placed a heavy emphasis on the quality of the data used. This trait is obvious in Hodgson's approach as it would be surprising if there is a more thorough documentation of the reported felt effects with respect to the surrounding topography, contributing factors or character assessment of the respondents themselves than is to be found in his report. Although every word written about this event and archived by the department was read for this re-evaluation, no undue emphasis was placed on source and reports were, for the most part, taken at face value.

## EVALUATION

### (A) Method

All original data were read, evaluated, and assigned an intensity on the Modified Mercalli Intensity Scale (Wood and Neumann, 1931) by the author. Each response was assigned an intensity representative of the maximum effect noted by the respondent provided that the observation was generally consistent with the other observations noted by the same observer. An example of an inconsistent reply would be an observation that there was structural damage to the home, but that no one in the household noticed anything more than a mild shaking. In such a case, the observation of damage would be disregarded. Similarly, caution was exercised when evaluating supplementary newspaper accounts as the language of the day (in the opinion of the author) seems a bit given to hyperbole. French language articles were double-checked by a second evaluator who was fluent in that tongue and assessments of original intensity verified. Intensity values were entered into a database table, whose structure is very similar to that used for modern day earthquakes. There were 491 unique Canadian entries in the table, 437 of which were from different communities. There were 179 distinct American entries.

### (B) Reliability and validity

With any statistical analysis, the questions of reliability and validity must be addressed. In the opinion of the author, newspaper accounts for this event were often embellished, particularly by sources remote from the epicenter who creatively rewrote the releases from agencies such as Associated Press. A good example occurred in the

recounting, in a Kitchener Ontario newspaper, of a student concert at the University of Montreal

> "One of the student soloists was about to sing into the microphone when suddenly, the 2,000 pound grand piano began to thump up and down and the building started to sway. The heavy steel towers on the roof were swinging in an alarming fashion and there was consternation. Stepping up to the microphone, Jacques Cartier, director, shot the following message thru (sic) the air. We are in the throes of an earthquake. If we are all alive after it is over the concert will be continued; we must shut off for the present."

The Montreal Star gave a more factual though less entertaining version of the same event.

Colourful language was not restricted to the rewrite desk as we see from a correspondent with the Kingston Standard, who happened to be in Grand-Mère at the time of the event (approx 200 km from epicenter).

> "The shaking was so hard that many fell unconscious, while others ran through the streets losing all presence of mind."

Despite these two more entertaining versions of events at the time of the earthquake, for the most part, reports seemed reasonable, particularly if emphasis is placed on the physical effects noticed as opposed to personal behaviour.

**(C) Evaluator perspective**

Hodgson had problems relying on external accounts, as his field trip following the earthquake proved many early reports of damage to be exaggerated and in some cases totally untrue. It is ironic that a lengthy article correcting the early descriptions of damage was published by the very media he found so unreliable. On April 2, 1925 the *Gravenhurst Banner* published an article "Preliminary Report of the earthquake of February 28, 1925" in which Hodgson summarized his findings and enumerated the more glaring examples of fallacious reporting. His opinion of the validity of survey forms was equally low. In his report (p 425) he states:

> "The investigations carried out with regard to this earthquake indicate that questionnaires as returned by volunteer observers or those to whom a general appeal has been made at the time ... are almost valueless as the basis of an isoseismal map. Many examples were found where the replies sent exaggerated conditions. Some minimized them. Some reports were found on investigation to be absolutely lacking in foundation. These erroneous reports are often – generally in fact – forwarded in perfectly good faith. The value of questionnaires appears when they are secured promptly and forwarded directly to the investigator in the field to be used as suggestions of points of contact, or lines of investigation."

Hodgson also placed great reliance on the level of education of the observer, preferring to deal with parish priests, train station masters and the like. He often included the professional designation of persons reporting (B.A., M.D.), occupation (scoutmaster) or described someone as a "fine gentleman". It is interesting to note that few women were interviewed by him, probably a function of the era rather than personal prejudice. He states (p 411):

> "...the data given are of little value for the determination of "intensity" because they are sent in by persons who are not known to those working on the earthquake. Many are sent in by quite incompetent observers. It is difficult, or impossible to distinguish between good observers and poor ones, simply from a returned questionnaire."

The re-evaluation undertaken recently did not dismiss these external reports so easily. It is true that newspaper articles often were overblown, but for every questionable recounting, there seems to have been a more factual report from another source, often another newspaper. In fact, Heck, commenting on the American reports, states "Press reports were found quite useful. In this case the natural tendency toward exaggeration and sensationalism seem to have been fairly well curbed." Similarly, no attempt was made to weigh the responses as a function of education or standing in the community. For obvious reasons, evaluating personal qualities of respondents was not an option, and secondly, it was felt lack of education does not necessarily correlate with being a poor observer. Each report was assessed independently and entered into the database. Questionable reported effects were down-graded when they were in conflict with reports from additional sources. The observations from the independent volunteers were found, on the whole, to be reliable.

**(D) Expertise of the day**

Fortunately, evaluating felt effects did not entail assessing some of the more bizarre explanations offered by the "experts" of the day. On the cause and effects from this earthquake, Father Odenbach, a Jesuit teaching at a university in Cleveland stated that the earthquake was due to a series of subterranean disturbances that were pushing up the entire section of the northeastern United States. He is quoted in a United Press article as further postulating:

> "In 10,000 years, Niagara Falls will be dry. The Great Lakes drainage will be to the west and south as it was thousands of years ago There will be a natural canal from Lake Michigan to the Mississippi."

Indeed, the "experts" made a number of glaring errors in the interpretation of phase data as the epicenter was variously reported as being off the coast of New England, near Washington, near Bermuda, under Hudson Bay and finally, at the junction of the of the Saguenay and St. Lawrence Rivers. Fortunately, modern instrumentation have made such gross mis-locations a thing of the past.

### (E) Historic place names

Difficulties arose with respect to place names that have since changed. Small communities have often been incorporated into larger ones, some have disappeared, and others undergone a name change. However, with the help of historical atlases and some assistance from the archives of Canadian Pacific Railways, these difficulties were all largely resolved. In a very few isolated instances the original location had to be inferred.

## FELT EFFECTS

### (A) Extent of felt area

This earthquake was felt as far north as James Bay. Three personal accounts were received from this remote area, lending considerable support for the delineation of the northern isoseismal boundary. To the west, reports were received from communities as far west as Lake Superior. The eastern boundary would certainly extend to 60° west longitude, (Nova Scotia) and possibly as far as Newfoundland. Historian Alan Ruffman, while doing research on the 1929 Grand Banks earthquake, came across a reference from the newspaper in Corner Brook, Newfoundland, saying the event was felt there. Unfortunately no other information was supplied. The southern limits would seem to extend to the Carolinas.

### (B) Maximum effects in the epicentral area

The most recent calculation of the epicenter of this earthquake (Stevens, 1980) is under the St. Lawrence River, in the northeast portion of the Charlevoix Seismic Zone, near L'île aux Liêvres, (±15 km). Note that this location is approximately 30 km northeast of the original location. The depth is estimated to be a relatively shallow 10 km. On either side of this major river are the St. Lawrence Lowlands, an area of deep alluvial soil, a prime area for farming (and consequent population density). All the more extreme effects can be related to these underlying soil conditions. Figure 2 shows a map of the immediate epicentral area.

In the immediate epicentral area (about 70 km radius), the maximum intensity assigned under the MM scale was VIII (IX on the Rossi-Forel Scale). On the south shore, severe effects occurred in Rivière-Ouelle where the church was very badly damaged with organ pipes projected upward and outward, and stones from the walls crashing to the ground (Figure 3). Fortunately no one was in the church at the time. Tombstones in the graveyard were overturned (Figure 4), and three stone houses between the railway station and the St. Lawrence River were badly damaged. Nearly all chimneys in the area were destroyed (Hodgson, 1950). Widespread fall of chimneys also occurred in the communities of Rivière-du-Loup, Kamouraska, St-Pascal, La Pocatière, St-Pacôme, St-Fabien (outside Figure 4 map area), St-Onésime, and Ste-Louise. Considerable damage was noted at La Pocatière where brick walls were cracked, plumbing was broken, and monuments were

thrown down. In St-Pacôme heavy furniture, including a safe and piano, were moved. And at the railway station the stove in the waiting room broke in half and the part containing the fire had to be rolled outside. Reports of changes in well water levels and quality were received from La Pocatière, Rivière-du-Loup, St-Onésime, St-Denis, and St-Fabien, and a farmer in Kamouraska reported that a spring opened on his land.

On the north shore, damage was similar but tended to be less severe. In Baie-St-Paul, church bells were thrown out of their bearings but not to the ground. Near La Malbaie, a large stone house, Manoir Cabot, was badly damaged and a church in St-Urbain suffered damage to its framework. Chimneys fell in Pointe-au-Pic, and Les Eboulements.

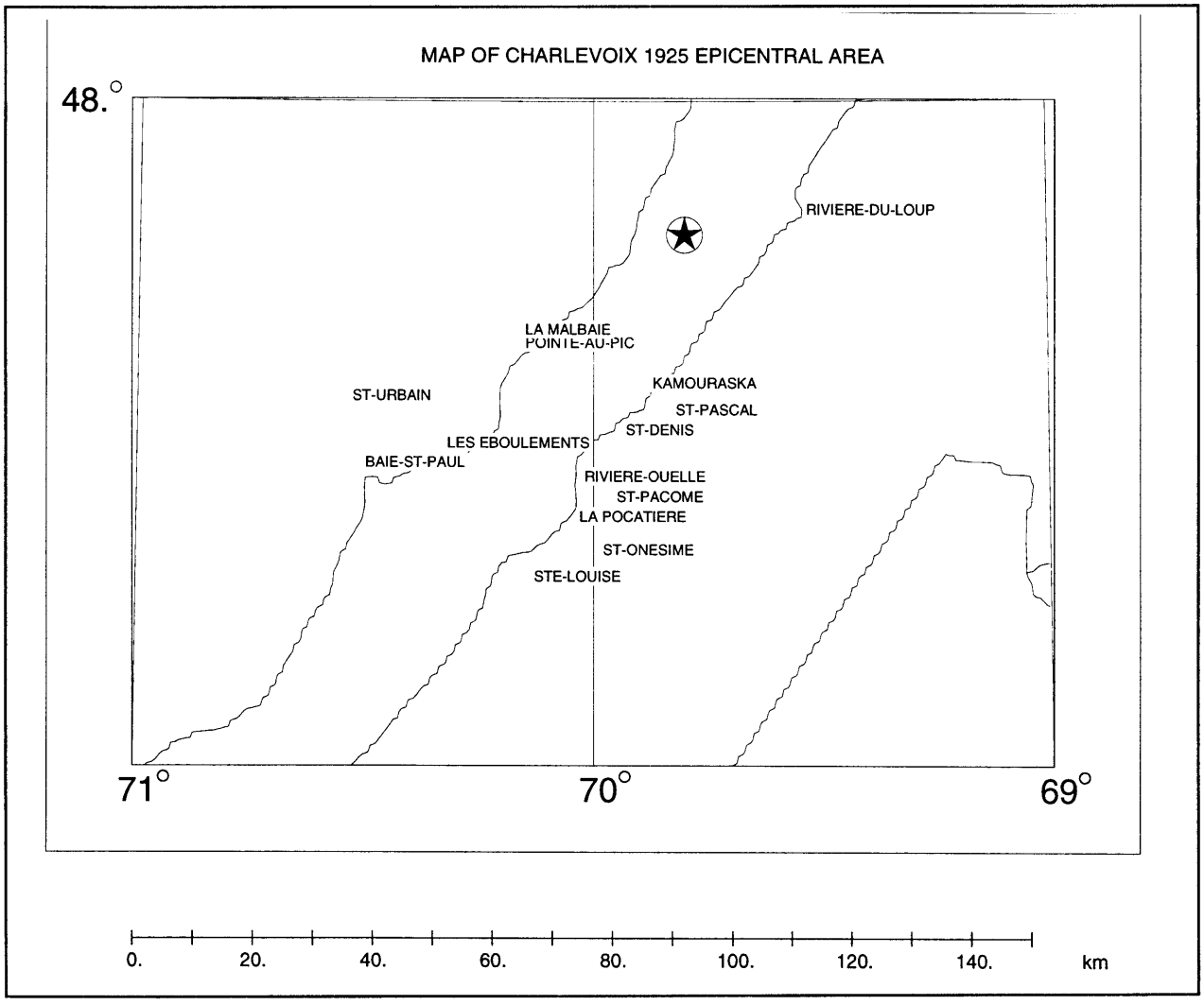


Figure 2. Communities in Epicentral area where maximum intensities reported.

Nowhere was there widespread damage, but instead specific damage occurred to large stone buildings (mostly churches) where a lack of steel reinforcements contributed to the outcome. Several stoves (the iron pot-bellied type known throughout Canada as Quebec heaters) were reported upset, but fortunately, no serious fires resulted from overturned stoves or lamps. There were numerous reports of "cracks" in the frozen snow crust, the most noticeable at La Pocatière. Several of these cracks extended into the soil beneath and were still visible when the snow melted. However there was no evidence of landslides or liquefaction.

Figure 3. Overturned tombstones in Rivière-Ouelle Cemetery (Hodgson, 1950).

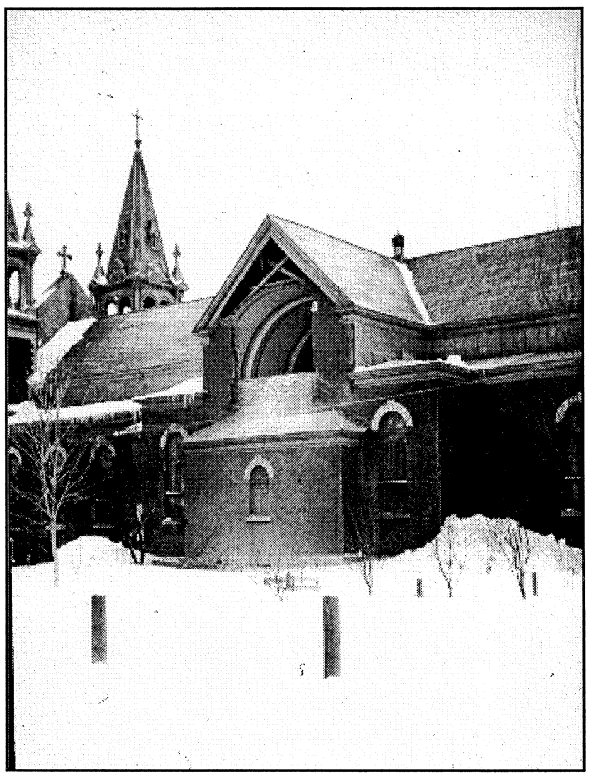

Figure 4. West transept wall at Rivière-Ouelle church (Hodgson, 1950).

As mentioned before, for a full account of damages observed, readers are encouraged to read Hodgson's report. In addition, some excellent photographs of the damage and an assessment of the causes from an engineering perspective can be found in Brunet and Lamontagne, (1994). Also of interest is a report by Savoie (1994) in which he interviewed surviving witnesses from the event, mostly from the St-Urbain and Baie-St-Paul areas.

**(C) Maximum effects outside epicentral area**

There were numerous communities rated VII on the MM scale outside the epicentral area as well. Reports of damage from Shawinigan, Québec City and Trois-Rivières, (all considerable distance from the epicenter) are probably related to soft soil conditions. At Québec City, 150 km from the estimated epicenter, in lowertown, where the city is close to the river, structural damage to the railway station, grain elevator and freight sheds was substantial. Yet in uppertown, where the city is built on bedrock, damage was minimal. One of the more memorable photographs showed huge icicles, totally undisturbed, on a centretown inn (Figure 5). In Shawinigan (250 km from the epicenter), significant damage was recorded at the aluminum plant and a number of brick walls fell (Figures 6 and 7). Although poor workmanship is blamed for much of the trouble, as the shaking was deemed insufficient to cause such effects, again, underlying terrain (clay banks) was thought to be a contributing factor (Abbott, 1926). Similarly in Trois-Rivières (about 250 km from the epicenter) damage to three industrial facilities is largely attributed to deep alluvial deposits and the top-heavy nature of the structures. There were numerous other communities reporting effects in the MM 7 range (see brief description and examples of each range in following section), most of them located close to the St. Lawrence River. Whether this distribution pattern is due to the fact that population is more dense along major transportation routes or the underlying soft ground conditions amplify ground motions is open to discussion. Certainly felt effects can be more closely related to the underlying terrain conditions, rather than the distance from the epicenter. A similar conclusion was reached by Cajka and Drysdale (1996) in their report documenting intensity effects of the 1988 Saguenay earthquake (M6) that occurred about 100 km from the Charlevoix earthquake.

In general, the most severe effects outside the epicentral area were related to chimney damage, rotated cemetery monuments, cracked walls and broken windows. Surprisingly, there were no deaths directly attributed to the event (at least to the physical effects). There were, however, three deaths resulting from "nervous shock" (all women), but present medical knowledge would almost certainly view the assessed cause in a highly sceptical light.

Figure 5. Undisturbed icicles in Quebec City (uppertown). In contrast, damage on the river banks (lowertown) was quite significant (Hodgson, 1950).


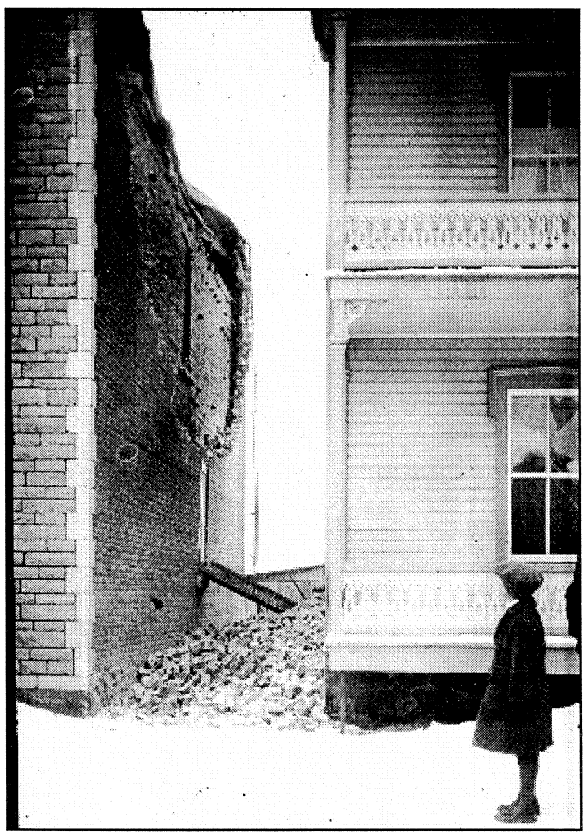

Figure 6. Damaged wall at Shawinigan (Hodgson, 1950).

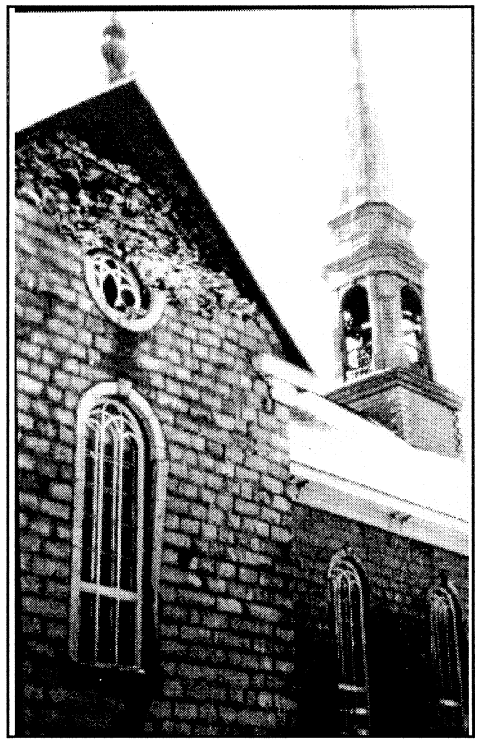

Figure 7. Damage to church in Shawinigan (Geological Survey of Canada archives).

The following is a synopsis of the distribution of intensity values.

| | MM Assigned Intensity | | |
|---|---|---|---|
| | Canadian | American | Total |
| MM VIII | 22 | 0 | 22 |
| MM VII | 30 | 0 | 29 |
| MM VI | 43 | 3 | 46 |
| MM V | 80 | 17 | 97 |
| MM IV | 186 | 53 | 240 |
| MM III | 97 | 35 | 132 |
| MM II | 4 | 71 | 75 |
| FELT | 10 | 0 | 10 |
| NF | 19 | 0 | 19 |
| | 491 | 179 | 670 |

The table of Canadian communities from which intensities were assessed are grouped by intensity in Appendix D. The U.S. data (converted) is listed in a similar manner in Appendix E.

## (D) Summary

These ranged from "not felt" to MM VIII. In some cases there were multiple entries from the same community: Ottawa, Montreal, and Quebec City for example. The effects in Ottawa ranged from "not felt" to stronger effects such as articles being thrown to the floor, structural damage to the Museum of Science (formerly the Victoria Museum) and wide-spread fear in certain situations (MM V). It is our standard procedure when evaluating conflicting effects to assign the highest intensity, provided it is deemed legitimate and not an isolated instance. (The same procedure was followed by Hodgson). Preference was given to the on-site observations of Hodgson where there was conflict with media reports. Obviously there is an element of subjectivity in the assignment of values that cannot be eliminated, only minimized.

## REPRESENTATIVE RESPONSES

**MM VIII**
Effects include wide-spread chimney damage, especially when associated with a subsequent fall, rotation and/or fall of tombstones, moderate structural damage, and changes in water level or quality in wells, and presence of fissures. It is assumed that the construction of the day would be considered moderately well-built (a consideration when applying the MM scale). In general, structures were not designed in a make-shift manner as they had to withstand the rigors of the Canadian winters, but neither did they employ modern engineering practices such as reinforcement of load-bearing walls.

Rivière-Ouelle, Québec.
(from Hodgson's scrapbook)

> "Wall of the railway station in ruins. Church badly damaged. Bells dislodged. Organ loft damaged."

St-Fabien, Québec.
From La Presse

> "Dans l'église, trois grandes statues ont été brisées. Dans le village, des cheminées ont été démolies."
> (Three large statues in the church were broken. In town, some chimneys were destroyed.)

**MM VII**
Effects include chimney damage, moderate structural damage, broken windows and small landslides.

Manoir Cabot (estate house near La Malbaie), Québec.
(from Hodgson's scrapbook)

> "The south windows in the second floor centre, bulged out one inch at the top. The wall on the south at the edge of the second floor bulged out at

least ½ inch. The chimney sagged out at least six inches at the top leaving a hole between the chimney and the roof which could be seen through to the sky from the chambers up on the second floor."

Stratford Centre, Québec.
(La Presse)

"Le choc fut violent. Dans plusieurs maisons les vitres furent brisées et des cheminées furent démolies. Les portes de quelques demeures furent ouvertes. La terreur fut très grande."
(The shock was violent. In several houses the windows were broken and the chimneys destroyed. The doors of several homes were opened. The fear was quite significant.)

**MM VI**

Effects include isolated damage of moderate nature such as broken dishware, fall of plaster, ringing of church bells and included movement of heavy furnishings, such as a piano. Many people were frightened.

Chicoutimi, Québec.
(from Hodgson's scrapbook)

"In the Port Alfred Pulp and Paper Co. Mill, the economiser, a heavy series of pipes filled with water, the pillar supporting was reported to have been cracked by the earthquake. Some stacked paper in the mill was reported to have 'shuffled' south."

Ste-Geneviève-de-Batiscan, Québec.
(La Presse)

"Plusieurs objets ont été brisés dans la maison et des poules ont été jetées en bas de leur perchoir dans les poulaillers. La frayeur fut grande dans la population. Un de nos clochers de l'église a été endommagé et la boule qui surmontait la croix est tombée."
(Several objects were broken in houses and chickens were thrown from their perch in the chicken coups. Everyone was frightened. One of our church bell towers was damaged and the ball on the top of the cross fell.)

**MM V**

This is characterized by objects falling with the occasional break, liquid being spilled, stopping of clocks, and vigorous shaking of structures.

Grenville (Bay), Québec.
(Hodgson's scrapbook)

"Thomas Grey had about a pail of water slopped over from a tub of water which was standing in the kitchen."

Pointe Claire, Québec.
(La Patrie)

> "Dans plusieurs habitations, meubles et brimborions furent précipités sur le plancher."
> (In several homes, furniture and knickknacks were thrown onto the floor.)

**MM IV**

This range is characterized by moderately strong shaking, powerful enough to make persons aware an earthquake is in progress. Objects rattle and often a heavy "thump" is noticed. People are awakened from sleep. It is a commonly reported range for any intensity survey.

Sharbot Lake, Ontario.
(Hodgson's scrapbook)

> "Dr. K.B. Suddably [sic] felt one shock lasting 1 1/2 minutes. Was in the first story of house. Wave motion. Was no noise of quake itself but dishes rattled and furniture moved."

Moncton, New Brunswick.
(Moncton Daily Times)

> "The city was severely shaken and much alarm caused to the citizens on Saturday night by the visitation of a severe earthquake shock which swayed buildings perceptibly.....The quake was a severe one and was announced to most people by a rumbling sound resembling distant thunder followed by a jar...Many people who had retired for the night were aroused from their slumbers and hastily arose to ascertain the cause of the disturbance."

**MM II**

Effects in this range include a perceptible shaking, not always recognized as an earthquake. There is sometimes a light rattling of objects, and a rumble often described as similar to that of a distant truck. This is usually the minimum intensity assigned if respondents report feeling an earthquake.

Windsor, Nova Scotia.
(Hodgson's scrapbook)

> "James A, Collector of Customs, observer in house on second story. Felt one shock lasting about one minute. Wave motion. Glass in mirror and pictures on wall shook. Short low rumbling sound. Earth with gypsum sub-strata."

Kitchener-Waterloo, Ontario.
(Toronto Daily Mail and Empire)

> "Kitchener and Waterloo residents distinctly felt the severe earthquake shocks Saturday night.... Though most people felt the shock distinctly, and

there were many cases of rattling dishes, swaying chandeliers and such like, there was no actual damage reported."

**MM II**
Effects include long-period swaying observed by sensitive persons, usually at considerable epicentral distance.

Port Rowan, Ontario.
(Hodgson's scrapbook)

"F.H. Perrault, observer, second story. Felt two shocks. Wave motion lasting one and one-half minutes. No noticeable effects. No noises heard. Heavy clay loam. Arm resting on table. Felt the table rocking. At first suspected his dog was rubbing the table leg. Did not suspect earthquake until he discovered there was no dog."

Agawa, Ontario. (over 1200 km from epicenter)
(Sault Ste Marie local paper)

"Mr. Dave Bussineau and family who were sitting in the house on the Bay Saturday night....felt the shock of the earthquake very plainly and stopped the clock at 9:22. The party was playing cards when the table began to move and the members of the party began to sway back and forth....until we all felt as if we were at sea. "

**MM I**
Effects include not felt or rarely felt. [Useless for assigning intensity. Either an event is felt or it isn't. Not used in this survey].

**Felt**
This designation used where respondents report an event as being felt but give no details as to intensity.

**Not felt.**
Reports from respondents who say they did not feel the earthquake. This designation is most useful for drawing the limits of the felt area.

## PLOTTING OF VALUES

### (A) Intensity Database

Using INGRES, a relational database management system, results were entered into a table whose standard structure is very similar to that used for all eastern Canada intensity surveys undertaken during the last ten years. Comments are terse because of space limitations and refer to such issues as source (e.g. which newspaper), reason for assigning a particular intensity (usually used only at the higher ranges) or any other circumstance deemed out of the ordinary or worthy of note. The place names in this table

were matched with place names in the postal database, a similar table containing postal codes and geographical co-ordinates for almost 6000 communities in Canada. To-day entries are matched on postal codes, a seven space alpha-numeric combination that leaves little room for error. Matching on the basis of place name proved much more arduous as entries had to match *exactly*, with a missing hyphen or apostrophe, a slight variation in usage or spelling, causing the matching program to reject entries. Place names, geographical co-ordinates, and assigned Modified Mercalli intensity values for each intensity range for all Canadian communities surveyed were listed alphabetically, then compiled by section in order of decreasing intensity (Appendix D). The American data is tabulated in a similar manner in Appendix E. The entire database file for this event is reproduced in Appendix F. Although the comment field is cryptic and was used primarily as a cross-reference as to source, the output is included for the sake of completeness.

**(B) Isoseismals**

A large scale base map was drawn and using an in-house plotting program, each MM intensity range was extracted from the database and plotted on a separate map. Anomalous points were double-checked for original content and association of geographic co-ordinates (Canadian data only) and modified where warranted. Then a series of overlays was developed and provisional isoseismal lines were drawn by hand.

Using an in-house filtering program to remove over-plotted values, the original 670 data points were filtered to 239 data points to improve overall clarity for the final published Figure 8. Basically the program sorts from the largest values down, and when the values are closer than a specific distance, only the larger value is plotted. Much redrawing and revising resulted in the results shown in Figure 8. Where it was not possible to delineate the boundary of a particular zone due to insufficient data, a broken line was used. This was the case with northern Québec and Ontario where, even to this day, populations are extremely sparse. However, the contour lines were drawn based on *all* data points. Figure 9 plots the extent of the area of chimney and other moderate damage (MM VII ).

Unfortunately, as is invariably the case in plotting intensity values, intensities could not be separated into discrete groupings. The best fit of the data is five separate zones with considerable overlap. Thus the epicentral area contoured as MM VIII is in fact characterized by a number of differing intensity values ranging from IV to VIII. Isoseismal lines have been drawn that best fit the values assigned with the higher values taking precedence. It must be kept in mind that the U.S. data points had been converted from the original Rossi-Forel values and were not re-evaluated.

**(C) Limit of felt area**

The greatest shortfall of this intensity survey is the lack of reports where the event was not felt as opposed to not reported. Modern methods usually sample an area significantly beyond the limits of the early felt reports hoping to clearly define the felt area.

In fact, the current questionnaire posted on the GSC website specifies that the form is to be returned even if the event was not felt, as this information is important for scientific research. Such was not the case years ago when collecting intensity data on a wide scale was relatively new and the importance of clearly defining the limit of the felt area was not realized. The limit of the felt area is therefore a matter of conjecture, given the limited data available. Smith (1962), based on a documented felt area of more than 2.5 $km^2$, suggests that the felt area for the 1925 Charlevoix event exceeded 5 million $km^2$ if the largely uninhabited regions were taken into account. It is suspected that additional research could broaden the felt area for the 1925 Charlevoix event (particularly in the United States with its larger population) and lend some support to Smith's hypothesis. As mentioned earlier, a newspaper article uncovered by Alan Ruffman during a study of the 1929 Newfoundland earthquake, reveals that the 1925 Charlevoix earthquake was also felt in Newfoundland (The Western Star, 1925). Findings such as this could significantly extend the boundary of the felt area in Canada. However, it would be premature to radically alter the felt boundary based on just one unsubstantiated newspaper felt report.

## DISCUSSION

### (A) Distribution of intensity

Without the original data from the United States, it would be misleading to draw any firm conclusions regarding the overall pattern of intensities. However a few observations on the Canadian data are warranted. Intensity values were greatest near the epicenter but underlying terrain was a significant variable. Almost all the more severe effects were confined to a narrow belt on either side of the St. Lawrence River or in areas underlain by soft soil or clay outside the epicentral area. Zones, particularly in the epicentral area, tend to be elongated rather than circular, almost certainly due to the geography of the area. The banks of the St. Lawrence River are characterized by deep alluvial deposits, a factor amplifying ground motion. Geography also contributes to a skewed population distribution pattern where historically people live on a major waterway for commerce reasons and gravitate to areas of fertile soil for farming purposes. Reporting patterns and personal investigations are, of necessity, weighted heavily toward these more densely populated areas. The absence of reports from northern Quebec and the Gaspé probably simply reflects a scarcity of inhabitants, although the weakness of these reports suggest asymmetry.

### (B) Rossi-Forel vs Modified Mercalli scale

The convention of enclosing areas of similar value contributes to a smoother, more cohesive pattern than that of the original intensity map joining Rossi-Forel values. This practice assumes that communities in the same general area experience the effects in a similar fashion; a rational conclusion particularly in the absence of extensive modern day sampling methods. It is a pointless exercise to try and explain the discrepancies between the isoseismal map originally published using the Rossi-Forel scale (Smith, 1966) and that

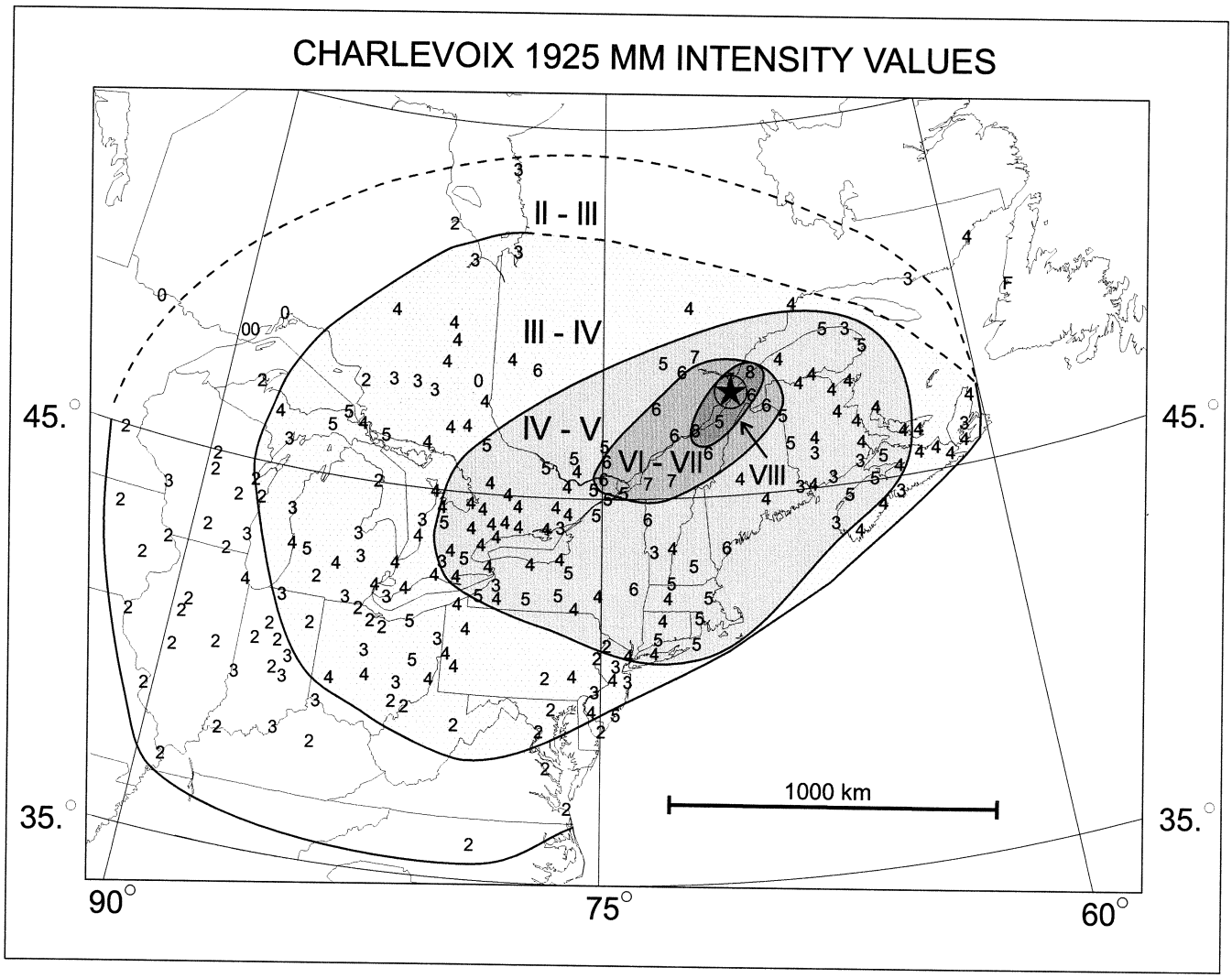


Figure 8. Isoseismal map for the 1925 Charlevoix earthquake. Communities reporting the event as "not felt" are plotted as zeroes and F refers to responses indicating only that the event was felt with no additional details. Data have been filtered to improve clarity but original contouring was done on a large-scale map upon which all data points were plotted. All original Canadian were re-evaluated; the U.S. data were converted from the original file.

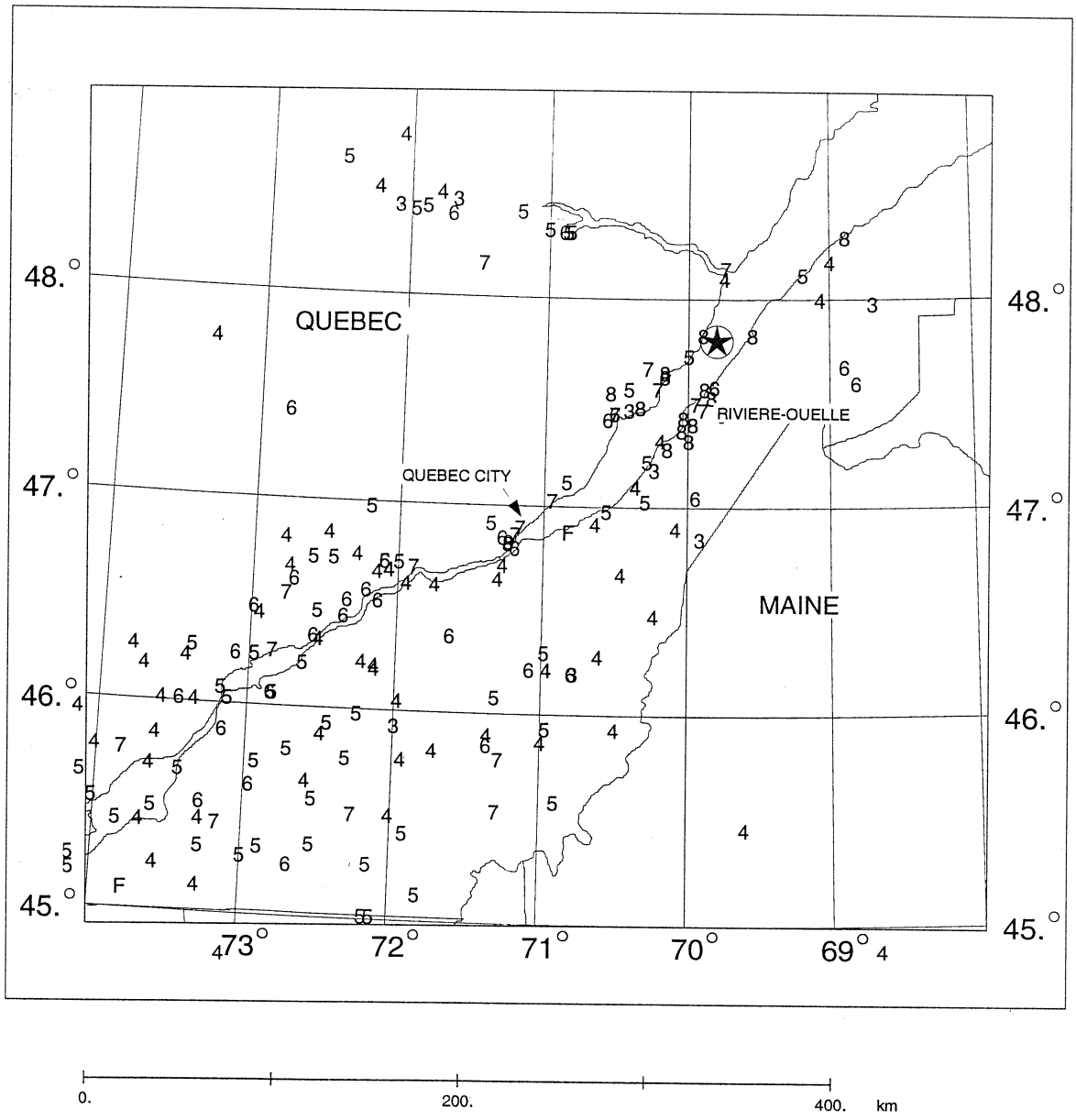


Figure 9. Modified Mercalli intensity values for area experiencing damage. All communities are plotted. Where more than one value was assigned for a community, the higher was plotted.

(albeit incomplete) using the MM scale. After a careful examination of the raw data, one has to conclude that the Rossi-Forel map as published by Smith is seriously flawed. Although there are similarities between the two scales, and the MM scale, as originally published, bracketed the equivalent Rossi-Forel values, at best the correlation is crude. For example, it was found when assessing values from Hodgson's original data, including the annotated values in his margins, that only occasionally were we in agreement. More often than not, values were 1- 2 categories different, particularly in the mid-range values. In addition, the phenomena used to primarily define Rossi-Forel designations I and II (recorded by seismographs) are not used in modern intensity assessment as it is not clear the event was required to be felt by a person rather than be instrumentally recorded. If an event is sufficient to be felt and effects described, then except in unusual circumstances, usually associated with the long period waves, it is assessed MM III.

In addition, if one looks at the America data (derived Mercalli data only) there is almost no correlation between those data and the original zones as published by Heck. For example, the state of Michigan had 20 communities where a Modified Mercalli intensity was assigned. These intensities ranged from 5 down to 2, with a median value of 3. However if one examines the original isoseismal by Smith (Rossi-Forel values), the entire state is enclosed in the II zone, with the exception of the southwest corner that is zoned I.

This is not to say the collection of data and the original analysis were in any way deficient; the problem is with the instrument used - the Rossi-Forel scale. Moreover, it would appear there was no problem with evaluator consistency. Hodgson stated in his report "It was found that the isoseismals, as drawn for the United States territory by the United States Coast and Geodetic Survey, fitted well with those indicated by our own data for Canada." From the examination of Hodgson's published reports and personal notes it is obvious much meticulous evaluation went into the project. Hodgson (1950) still remains the most comprehensive account of the effects of this earthquake. The derived map however is flawed with respect to the isoseismal boundaries. Perhaps because Hodgson was so unconvinced of the competence of observers and the value of the isoseismal maps derived from observations other than his own, he personally never published such a map.

**(C) A Similar earthquake**

It is interesting to note that a modern earthquake of similar size, location and time of day revealed a similar pattern of intensity values. On November 25, 1988, an earthquake measuring 5.9 mb ($m_{blg}$ 6.5) occurred in the Saguenay area of Québec about 100 km northeast of the 1925 Charlevoix event. The distribution of intensity values is shown in Figure 10. Certainly there were important differences between these two events. The Saguenay earthquake had an unusual depth of 29 km, which is deeper than 95% of all other earthquakes recorded in eastern Canada (Lamontagne, *et al.,*1990) and was characterized by few aftershocks, whereas the Charlevoix earthquake is believed to have

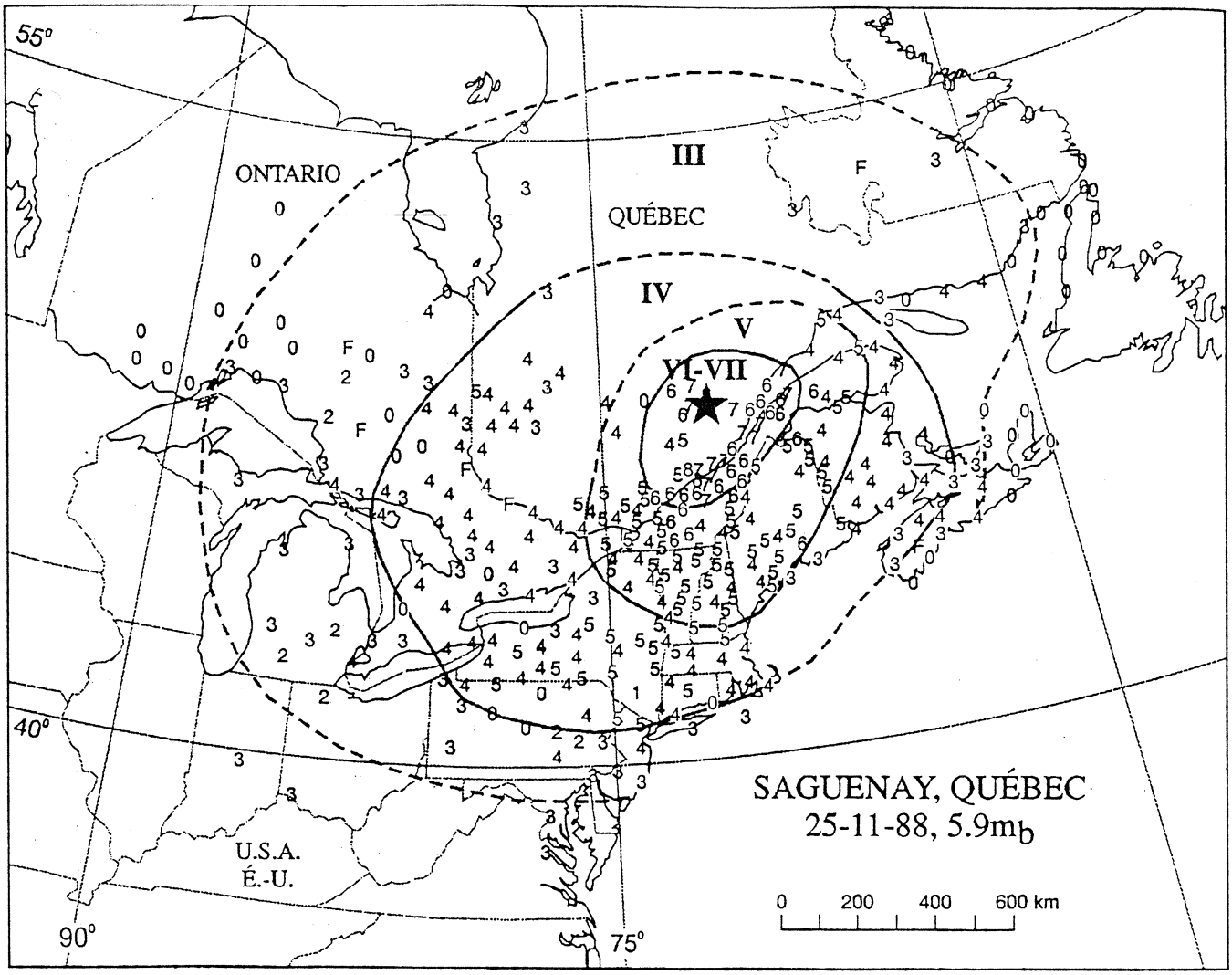


Figure 10. Isoseismal map for the 1988 Saguenay Québec M5.9 earthquake (Cajka and Drysdale, 1996)

occurred at about 10 km depth and was characterized by a large number of aftershocks, continuing for months. The epicenter of the Charlevoix earthquake is believed to be under the riverbed of the St. Lawrence River, which is surrounded by the St. Lawrence Lowlands, a physiographical region of deep unconsolidated deposits. The epicenter of the Saguenay earthquake, by contrast, is located in the Canadian Shield, an area of Precambrian rock. Also, the Saguenay earthquake was characterized by an unusual amount of high frequency energy (North *et al.,* 1989). Nevertheless, for purposes of intensity comparisons, the two events are more alike than dissimilar, and it is worthwhile to consider some interesting parallels.

All of the more dramatic effects documented for the 1925 event occurred in a narrow belt about 30 km long covering both sides of the St. Lawrence River or in areas of unstable ground more distant from the epicenter. Just as the degree of damage associated with the Saguenay event was most severe in areas of soft ground, so too the softer soils in the epicentral area of the Charlevoix earthquake appeared to amplify the accompanying seismic waves, thereby playing a crucial role in increasing the resulting damage. Both earthquakes appear to have been more strongly felt in a southerly direction. In the case of the Saguenay earthquake, Haddon, (1992) using strong motion data, postulated a long, narrow fault surface, probably 30 km deep, originating at the northwest end of the long axis of the focal plane and propagating in a southeasterly direction. Thus energy focusing due to rupture directivity may have played a role in intensity distribution. The southwestern concentration of felt values for the Charlevoix earthquake is probably more a function of population distribution. The extent of the felt area is remarkably similar for both events - 3.5 million $km^2$ for Saguenay (Cajka and Drysdale, 1996) as opposed to the 2.5 -5.0 million $km^2$ (Smith, 1962) postulated for the Charlevoix earthquake. Distribution of intensity values supports the higher magnitude values for the Charlevoix event. For example, the Charlevoix earthquake was felt more strongly in Cape Breton Island, Sault Ste Marie and southern Ohio than was the Saguenay earthquake.

## SUMMARY

On March 1, 1925 at 02:19 UT (February 28 at 21:19 EST) an earthquake measuring over M6 occurred in the Charlevoix area of Québec. An intensity study was completed in the months following, and results from both Canada and the United States were analyzed using the Rossi-Forel scale. Results were amalgamated but it wasn't until 1966 that the final map was published. This map was rather unusually contoured, bearing little resemblance to the roughly concentric pattern characterizing most modern intensity maps. This could in part be explained by the fact that in the tradition of Rossi-Forel, values were joined rather than enclosed. Unfortunately, somewhere along the line, an error was made (and later compounded) stating the source as MM values ( a scale which supplanted the Rossi-Forel in 1931) when in fact they were Rossi-Forel. In order to clarify the situation, it was decided to re-evaluate the original data using the MM scale.

All the original Canadian data were re-evaluated. Although the original American data were missing, the converted MM values were forwarded and are included in the map. The resulting map shows a reasonable distribution of values, with a felt area consistent with what would be expected for an event of this magnitude. Maximum intensities of MM VIII were recorded in the epicentral area, although damage was not widespread. Population distribution seems to be the major factor influencing distribution with sparse population north of the epicentral zone controlling the isoseismal boundaries. Certainly, ground conditions are a major variable, resulting in a widely differing intensities for the same region. Damage outside the epicentral zone is restricted to areas of unstable terrain compounded by unsuitable building standards. The intensity distribution for this earthquake is in many respects similar to the Saguenay earthquake of 1988, an earthquake of similar location and slightly smaller magnitude. Although no firm conclusions can be made based on the American data, it would seem the Appalachian area was not as affected as other areas at the same epicentral distance. Clearly, the more-heavily populated United States contributes to the pattern of a southern concentration of felt values as opposed to similar epicentral distances to the north. The limits of the felt area are subject to speculation as it is not clear if the earthquake was not felt as opposed to not surveyed. It would be most useful to re-evaluate this data if it exists, or failing this, do a comprehensive newspaper search.

## LIMITATIONS OF THE ISOSEISMAL SURVEY METHOD

It is appropriate to quote the author of the definitive study of the 1925 Charlevoix earthquake, Ernest A. Hodgson (1950, p 411), on the value of questionnaires as the basis for producing an isoseismal map

> "The evaluation of intensity by the Rossi-Forel scale or any other scale that can be devised for application in a similar manner, is so poor as to be almost worse than valueless - it tends to be misleading."

Modern experience with intensity scales does not bear out Hodgson's pessimistic conclusion. Where there is sufficient response to neutralize the more extreme effects noted, it is possible to draw reliable and valid zones. Certainly the higher values assessed for damage should be (and usually are) investigated by a field party. Mid-range values can be collected quite reliably by the questionnaire method. When conclusions must be based on widely scattered and conflicting observations however, the limit of the felt area may be the only useful information gathered by this method. At best, any kind of anecdotal observation scale is a very blunt instrument.

It is hoped the preceding study has made a small but significant contribution to understanding this important event in Canadian earthquake history.

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## ACKNOWLEDGEMENTS

I would like to take this opportunity to thank various persons who have significantly contributed to this project. In addition to providing direct assistance, reviewers Dr. Maurice Lamontagne and Janet Drysdale made numerous comments and suggestions for the original manuscript that have been most useful and contributed to increased clarity. Sylvia Lehmann cheerfully re-evaluated all french language reports. Dr. Chin Wong assisted in designing appropriate databases, while Frank Anglin adapted his in-house mapping program to incorporate numerous specific requests. John Armbruster of Lamont Dougherty forwarded the American data and confirmed the source. Finally, Dr. Anne Stevens, a researcher of the most exacting standards, has unfailingly given her moral support and the benefit of her vast experience in a positive and unlimited manner. In fact, it was she who originally suggested there may be an error in Smith's description of the original data. To each of these persons, I am most grateful.

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Appendix A.
Intensity survey form used in 1925

**DOMINION ASTRONOMICAL OBSERVATORY**

OTTAWA, CANADA

Kindly answer the following question and return in enclosed envelope;-

1. Place and date of earthquake.

2.Time of shock: Hour; minute; if possible second too.

3. What control is there for accuracy of time; is it railroad time?

4.Where was the observer? In the open? In the house? In which story?

5. Duration of shock?

6. Number, duration of shocks, if more than one?

7. Nature of shock, wave-motion or jerk?

8. What effect; windows rattle, bells ring, plaster of walls crack, chimneys fall?
If so, on which side of house N., E., S., W., was crack?
In which direction did chimney fall?

9. Was the earthquake accompanied by any noise? Describe it.

10. Nature of ground in vicinity , any rock exposures?

11. Other observations.

12. Name and address of observer..

## Appendix B

### 1883 Rossi-Forel Scale of Earthquake Intensity

| | |
|---|---|
| I | Recorded by a single seismograph or by some seismographs of the same pattern, but not by several seismographs of different kinds; the shock felt by an experienced observer. |
| II | Recorded by seismographs of different kinds; felt by a small number of persons at rest. |
| III | Felt by several persons at rest; strong enough for the duration or direction to be appreciable. |
| IV | Felt by several persons in motion; disturbance of moveable objects, doors, windows, creaking of floors. |
| V | Felt generally by everyone; disturbance of furniture and beds; ringing of some bells. |
| VI | General awakening of those asleep; general ringing of bells; oscillation of chandeliers, stopping of clocks; visible disturbance of trees and shrubs; some startled persons leave their dwellings. |
| VII | Overthrow of moveable objects, fall of plaster, ringing of church-bells, general panic, without damage to buildings. |
| VIII | Fall of chimneys, cracks in the walls of buildings. |
| IX | Partial or total destruction of some buildings. |
| X | Great disasters, ruins, disturbance of strata, fissures in the earth's crust, rock-falls from mountains. |

[after Charles Davison; A Manual of Seismology (1924), p 45]

Appendix C

By Harry O. Wood and Frank Neumann
Published in Bulletin of the Seismological Society of America, **21,** p 277-283.

## MODIFIED MERCALLI INTENSITY SCALE OF 1931

Adapted from Sieberg's Mercalli-Cancani scale, modified and condensed.

I. Not felt – or, except rarely under especially favourable circumstances.
Under certain conditions, at and outside the boundary of the area which a great shock is felt:
sometimes birds, animals, reported uneasy or disturbed;
sometimes dizziness or nausea experienced; sometimes trees, structures, liquids, bodies of water, may sway – doors may swing, very slowly.

II. Felt indoors by few, especially on upper floors, or by sensitive, or nervous persons.
Also, as in grade I, but often more noticeably:
sometimes hanging objects may swing, especially when delicately suspended;
sometimes trees, structures, liquids, bodies of water, may sway, doors may swing, very slowly;
sometimes birds, animals, reported uneasy or disturbed;
sometimes dizziness or nausea experienced.

III. Felt indoors by several, motion usually rapid vibration.
Sometimes not recognized to be an earthquake at first.
Duration estimated in some cases.
Vibration like that due to passing of light, or lightly loaded trucks, or heavy trucks some distance away.
Hanging objects may swing slightly.
Movement may be appreciable on upper levels of tall structures.
Rocked standing motor cars slightly.

IV. Felt indoors by many, outdoors by few.
Awakened few, especially light sleepers.
Frightened no one, unless apprehensive from previous experience.
Vibration like that due to passing of heavy, or heavily loaded trucks.
Sensation like heavy body striking building, or falling of heavy objects inside.
Rattling of dishes, windows, doors; glassware and crockery clink and clash.
Creaking of walls, frame, especially in the upper range of this grade.
Hanging objects swing, in numerous instances.
Disturbed liquids in open vessels slightly.
Rocked standing motor cars slightly.

V. Felt indoors by practically all, outdoors by many or most: outdoors direction estimated.
Awakened many, or most.
Frightened few — slight excitement, a few ran outdoors.
Buildings trembled throughout.
Broke dishes, glassware, to some extent.
Cracked windows — in some cases, but not generally.
Overturned small or unstable objects, in many instances, with occasional fall.
Hanging objects, doors, swing generally or considerably.
Knocked pictures against walls, or swung them out of place.
Opened or closed, doors, shutters, abruptly.
Pendulum clocks stopped, started, or ran fast, or slow.
Moved small objects, furnishings, the latter to slight extent.
Spilled liquids in small amounts from well-filled open containers.
Trees, bushes, shaken slightly.

VI. Felt by all, indoors and outdoors.
Frightened many, excitement general, some alarm, many ran outdoors.
Awakened all.
Persons made to move unsteadily.
Trees, bushes, shaken slightly to moderately.
Liquid set in strong motion.
Small bells rang – church, chapel, school etc.
Damage slight in poorly built buildings.
Fall of plaster in small amount.
Cracked plaster somewhat, especially fine cracks chimneys in some instances.
Broke dishes, glassware, in considerable quantity, also some windows.
Fall of knick-knacks, books, pictures.
Overturned furniture, in many instances.
Moved furnishings of moderately heavy kind.

VII. Frightened all – general alarm, all ran outdoors.
Some, or many, found it difficult to stand.
Noticed by persons driving motor cars.
Trees and bushes shaken moderately to strongly.
Waves on ponds, lakes, and running water.
Water turbid from mud stirred up.
Incaving to some extent of sand or gravel stream banks.
Rang large church bells, etc.
Suspended objects made to quiver.

VIII Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary buildings, considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires,

etc.
Cracked chimneys to considerable extent, walls to some extent.
Fall of plaster in considerable to large amount, also some stucco.
Broke numerous windows, furniture to some extent.
Shook down loosened brickwork and tiles.
Broke weak chimneys at the roof-line (sometimes damaging roofs).
Fall of cornices from towers and high buildings.
Dislodged bricks and stones.
Overturned heavy furniture, with damage from breaking.
Damage considerable to concrete irrigation ditches.

VIII. Fright general – alarm approaches panic.
Disturbed persons driving motor cars.
Trees shaken strongly – branches, trunks, broken off, especially palm trees.
Ejected sand and mud in small amounts.
Changes: temporary, permanent; in flow of springs and wells; dry wells renewed flow; in temperature of spring and well waters.
Damage slight in structures (brick) built especially to withstand earthquakes.
Considerable in ordinary substantial buildings, partial collapse: racked, tumbled down, wooden houses in some cases; threw out panel walls in frame structures, broke off decayed piling.
Fall of walls.
Cracked, broke, solid stone walls seriously.
Wet ground to some extent, also ground on steep slopes.
Twisting, fall, of chimneys, columns, monuments, also factory stack, towers.
Moved conspicuously, overturned, very heavy furniture.

IX. Panic general.
Cracked ground conspicuously.
Damage considerable in (masonry) structure built especially to withstand earthquakes:
threw out of plumb some wood-frame houses built especially to withstand earthquakes;
great in substantial (masonry) buildings, some collapse in large part; or wholly shifted frame buildings off foundations, racked frames; serious to reservoirs; underground pipes sometimes broken.

X Cracked ground, especially when loose and wet, up to widths of several inches; fissures up to a yard in width ran parallel to canal and stream banks.
Landslides considerable from river banks and steep coasts.
Shifted sand and mud horizontally on beaches and flat land.
Changed level of water in wells.
Threw water on banks of canals, lakes, rivers, etc.
Damage serious to dams, dikes, embankments.

Severe to well-built wooden structures and bridges, some destroyed.
Developed dangerous cracks in excellent brick walls.
Destroyed most masonry and frame structures, also their foundations.
Bent railroad rails slightly.
Tore apart, or crushed endwise, pipe lines buried in earth.
Open cracks and broad wavy folds in cement pavements and asphalt road surfaces.

XI. Disturbances in ground many and widespread, varying with ground material.
Broad fissures, earth slumps, and land slips in soft, wet ground.
Ejected water in large amounts charged with sand and mud.
Caused sea-waves ("tidal" waves) of significant magnitude.
Damage severe to wood-frame structures, especially near shock centers.
Great to dams, dikes, embankments, often for long distances.
Few, if any (masonry), structures remained standing.
Destroyed large well-built bridges by the wrecking of supporting piers, or pillars.
Affected yielding wooden bridges less.
Bent railroad rails greatly, and thrust them endwise.
Put pipe lines buried in earth completely out of service.

XII. Damage total – practically all works of construction damaged greatly or destroyed.
Disturbances in ground great and varied, numerous shearing cracks.
Landslides, falls of rock of significant character, slumping of river banks, etc. numerous and extensive.
Wrenched loose, tore off, large rock masses.
Fault slips in firm rock, with notable horizontal and vertical offset displacements.
Water channels, surface and underground, disturbed and modified greatly.
Dammed lakes, produced waterfalls, deflected rivers, etc.
Waves seen on ground surfaces (actually seen, probably, in some cases).
Distorted lines of sight and level.
Threw objects upward into the air.

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## Appendix D

### INTENSITY 8
### (CANADA)

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| CABOT MANOIR | QUE. | 47.630 | -70.150 | 8 |
| KAMOURASKA | QUE. | 47.570 | -69.870 | 8 |
| LA POCATIERE | QUE. | 47.370 | -70.030 | 8 |
| LES EBOULEMENTS | QUE. | 47.480 | -70.320 | 8 |
| LIMOILOU | QUE. | 46.830 | -71.230 | 8 |
| POINTE-AU-PIC | QUE. | 47.630 | -70.150 | 8 |
| QUEBEC | QUE. | 46.820 | -71.230 | 8 |
| RIVIERE-DU-LOUP | QUE. | 47.830 | -69.530 | 8 |
| RIVIERE-OUELLE | QUE. | 47.430 | -70.020 | 8 |
| ST-FABIEN | QUE. | 48.300 | -68.870 | 8 |
| ST-ONESIME | QUE. | 47.320 | -69.980 | 8 |
| ST-PACOME | QUE. | 47.400 | -69.950 | 8 |
| ST-PASCAL | QUE. | 47.530 | -69.820 | 8 |
| ST-SIMEON | QUE. | 47.830 | -69.880 | 8 |
| ST-URBAIN-DE-CHARLEVOIX | QUE. | 47.550 | -70.530 | 8 |
| STE-LOUISE | QUE. | 47.280 | -70.130 | 8 |

### INTENSITY 7
### (CANADA)

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| BAIE-ST-PAUL | QUE | 47.450 | -70.500 | 7 |
| BEAUPORT | QUE. | 46.867 | -71.183 | 7 |
| BOISCHATEL | QUE. | 46.900 | -71.150 | 7 |
| LA MALBAIE | QUE. | 47.650 | -70.150 | 7 |
| LA POCATIERE | QUE. | 47.370 | -70.030 | 7 |
| LES EBOULEMENTS | QUE. | 47.480 | -70.320 | 7 |
| MARIEVILLE | QUE. | 45.433 | -73.167 | 7 |
| POINTE-AU-PIC | QUE. | 47.630 | -70.150 | 7 |
| PORTNEUF | QUE. | 46.700 | -71.880 | 7 |
| QUEBEC | QUE. | 46.820 | -71.230 | 7 |
| RACINE | QUE. | 45.500 | -72.250 | 7 |
| RIVIERE-OUELLE | QUE. | 47.430 | -70.020 | 7 |
| RIVIERE PIKAUBA | QUE. | 48.166 | -71.450 | 7 |
| SCOTSTOWN | QUE. | 45.533 | -71.283 | 7 |
| SHAWINIGAN | QUE. | 46.550 | -72.750 | 7 |
| ST-DENIS-DE-LA-BOUTEILLERIE | QUE. | 47.500 | -69.930 | 7 |
| ST-DONAT-DE-RIMOUSKI | QUE. | 48.500 | -68.270 | 7 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ST-IRENEE | QUE. | 47.570 | -70.200 | 7 |
| ST-PASCAL | QUE. | 47.530 | -69.820 | 7 |
| ST-PHILIPPE-DE-NERI | QUE. | 47.470 | -69.880 | 7 |
| ST-URBAIN-DE-CHARLEVOIX | QUE. | 47.550 | -70.530 | 7 |
| STE-AGNES-DE-CHARLEVOIX | QUE. | 47.670 | -70.270 | 7 |
| STE-ANNE-DE-BEAUPRE | QUE. | 47.030 | -70.930 | 7 |
| STE-ANNE-DES-PLAINES | QUE. | 45.770 | -73.820 | 7 |
| STRATFORD CENTRE | QUE. | 45.783 | -71.267 | 7 |
| TADOUSSAC | QUE. | 48.150 | -69.720 | 7 |
| YAMACHICHE | QUE. | 46.270 | -72.830 | 7 |

**INTENSITY 6**
**(CANADA)**

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ALFRED | ONT. | 45.550 | -74.880 | 6 |
| BAIE-ST-PAUL | QUE. | 47.450 | -70.500 | 6 |
| BARRAUTE | QUE. | 48.430 | -77.630 | 6 |
| BEAUCEVILLE-OUEST | QUE. | 46.200 | -70.780 | 6 |
| CABANO | QUE. | 47.680 | -68.880 | 6 |
| CHAMPLAIN | QUE. | 46.450 | -72.350 | 6 |
| CHARLESBOURG | QUE. | 46.850 | -71.270 | 6 |
| DESCHAILLONS | QUE. | 46.530 | -72.120 | 6 |
| EAST BROUGHTON | QUE. | 46.217 | -71.067 | 6 |
| EDMUNDSTON | N.B. | 47.370 | -68.330 | 6 |
| GRAND-MERE | QUE. | 46.620 | -72.700 | 6 |
| HEBERTVILLE | QUE. | 48.400 | -71.683 | 6 |
| JOLIETTE | QUE. | 46.020 | -73.450 | 6 |
| KAMOURASKA | QUE. | 47.570 | -69.870 | 6 |
| KNOWLTON | QUE. | 45.250 | -72.670 | 6 |
| LA MALBAIE | QUE. | 47.650 | -70.150 | 6 |
| LA TUQUE | QUE. | 47.430 | -72.780 | 6 |
| LEVIS-LAUZON | QUE. | 46.800 | -71.183 | 6 |
| LORETTEVILLE | QUE. | 45.850 | -71.350 | 6 |
| NOTRE-DAME-DU-LAC | QUE. | 47.600 | -68.800 | 6 |
| PORT-ALFRED | QUE. | 48.320 | -70.880 | 6 |
| RIVIERE-DU-LOUP | QUE. | 47.830 | -69.530 | 6 |
| ST-ALBAN | QUE. | 46.720 | -72.080 | 6 |
| ST-ANTOINE-DE-CHARLEVOIX | QUE. | 47.420 | -70.550 | 6 |
| ST-BASILE-LE-GRAND | QUE. | 45.530 | -73.280 | 6 |
| ST-BRUNO-DE-KAMOURASKA | QUE. | 47.450 | -69.750 | 6 |
| ST-ELIE | QUE. | 46.480 | -72.970 | 6 |
| ST-FRANCOIS-DU-LAC | QUE. | 46.067 | -72.833 | 6 |
| ST-GERMAIN-DE-KAMOURASKA | QUE. | 47.580 | -69.800 | 6 |

| | | | | |
|---|---|---|---|---|
| ST-HYACINTHE | QUE. | 45.620 | -72.950 | 6 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ST-JUSTIN | QUE. | 46.250 | -73.080 | 6 |
| ST-OURS | QUE. | 45.880 | -73.150 | 6 |
| ST-REMI-D'AMHERST | QUE. | 46.020 | -74.770 | 6 |
| ST-URBAIN-DE-CHARLEVOIX | QUE. | 47.550 | -70.530 | 6 |
| STE-ANASTASIE | QUE. | 46.370 | -71.620 | 6 |
| STE-ANNE-DE-BEAUPRE | QUE. | 47.030 | -70.930 | 6 |
| STE-ANNE-DE-LA-PERADE | QUE. | 46.580 | -72.200 | 6 |
| STE-GENEVIEVE-DE-BATISCAN | QUE. | 46.530 | -72.330 | 6 |
| STE-LOUISE | QUE. | 47.280 | -70.130 | 6 |
| STE-PERPETUE-DE-L'ISLET | QUE. | 47.050 | -69.930 | 6 |
| TROIS-RIVIERES | QUE. | 46.350 | -72.550 | 6 |

**INTENSITY 6**
**(UNITED STATES)**

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ALBANY | NY | 42.650 | -73.760 | 6 |
| BURLINGTON | VT | 44.480 | -73.210 | 6 |
| PORTLAND | ME | 43.650 | -70.280 | 6 |

**INTENSITY 5**
**(CANADA)**

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| AMOS | QUE. | 48.580 | -78.120 | 5 |
| ANGELINE | QUE. | 45.330 | -72.870 | 5 |
| ANNAPOLISROYAL | N.S. | 44.750 | -65.520 | 5 |
| BEEBE | QUE. | 45.017 | -72.150 | 5 |
| BERTHIERVILLE | QUE. | 46.080 | -73.170 | 5 |
| CALEDONIASPRINGS | ONT. | 45.550 | -74.800 | 5 |
| CHICOUTIMI | QUE. | 48.430 | -71.070 | 5 |
| COATICOOK | QUE. | 45.130 | -71.800 | 5 |
| CORNWALL | ONT. | 45.030 | -74.730 | 5 |
| DESBIENS | QUE. | 48.417 | -71.950 | 5 |
| DUNDAS | ONT. | 43.267 | -79.967 | 5 |
| DURHAM | ONT. | 44.167 | -80.817 | 5 |
| EMBRUN | ONT. | 45.270 | -75.280 | 5 |
| FARNHAM | QUE. | 45.283 | -72.983 | 5 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| GRACEFIELD | QUE. | 46.100 | -76.050 | 5 |
| GRANDFALLS | N.B. | 47.050 | -67.730 | 5 |
| GRANDE-BAIE | QUE. | 48.320 | -70.850 | 5 |
| GRENVILLE | QUE. | 45.630 | -74.600 | 5 |
| HARTLAND | N.B. | 46.300 | -67.530 | 5 |
| JONQUIERE | QUE. | 48.417 | -71.183 | 5 |
| KENTVILLE | N.S. | 45.080 | -64.500 | 5 |
| L'AVENIR | QUE. | 45.767 | -72.300 | 5 |
| LAC-MEGANTIC | QUE. | 45.583 | -70.883 | 5 |
| LOUISEVILLE | QUE. | 46.250 | -72.950 | 5 |
| MAGOG | QUE. | 45.267 | -72.133 | 5 |
| METABETCHOUAN | QUE. | 48.433 | -71.867 | 5 |
| MONT-LOUIS | QUE. | 49.250 | -65.730 | 5 |
| MONT-TREMBLANT | QUE. | 46.220 | -74.600 | 5 |
| MONTMAGNY | QUE. | 46.983 | -70.550 | 5 |
| MONTREAL | QUE. | 45.500 | -73.600 | 5 |
| NICOLET | QUE. | 46.217 | -72.617 | 5 |
| NORTHBAY | ONT. | 46.320 | -79.467 | 5 |
| NOTRE-DAME-DES-LAURENTIDES | QUE. | 46.920 | -71.350 | 5 |
| OTTAWA | ONT. | 45.420 | -75.700 | 5 |
| PEMBROKE | ONT. | 45.820 | -77.120 | 5 |
| PIERREVILLE | QUE. | 46.067 | -72.817 | 5 |
| POINTE-CLAIRE | QUE. | 45.430 | -73.830 | 5 |
| PORT-ALFRED | QUE. | 48.320 | -70.880 | 5 |
| RIVIERE-A-PIERRE | QUE. | 46.983 | -72.183 | 5 |
| ROCK-ISLAND | QUE. | 45.017 | -72.100 | 5 |
| ROXTON-FALLS | QUE. | 45.567 | -72.517 | 5 |
| SALABERRY-DE-VALLEYFIELD | QUE. | 45.250 | -74.130 | 5 |
| SEPT-CHUTES | QUE. | 47.120 | -70.830 | 5 |
| SHERBROOKE | QUE. | 45.420 | -71.900 | 5 |
| SOREL | QUE. | 46.030 | -73.120 | 5 |
| SOWERBY | ONT. | 46.300 | -83.400 | 5 |
| SPRINGHILL | N.S. | 45.650 | -64.050 | 5 |
| ST-ADELPHE-DE-CHAMPLAIN | QUE. | 46.730 | -72.430 | 5 |
| ST-ALBAN | QUE. | 46.720 | -72.080 | 5 |
| ST-ALEXIS | QUE. | 48.320 | -70.830 | 5 |
| ST-ANTOINE-DE-CHARLEVOIX | QUE. | 47.420 | -70.550 | 5 |
| ST-BARNABE-SUD | QUE. | 45.733 | -72.917 | 5 |
| ST-CYRILLE-DE-L'ISLET | QUE. | 47.030 | -70.280 | 5 |
| ST-CYRILLE-DE-WENDOVER | QUE. | 45.933 | -72.433 | 5 |
| ST-EUGENE-DE-GRANTHAM | QUE. | 45.800 | -72.700 | 5 |
| ST-EVARISTE-DE-FORSYTH | QUE. | 45.933 | -70.950 | 5 |
| ST-FELICIEN | QUE. | 48.650 | -72.450 | 5 |
| ST-FIDELE | QUE. | 47.730 | -69.980 | 5 |
| ST-FREDERIC | QUE. | 46.300 | -70.967 | 5 |
| ST-GABRIEL-DE-BRANDON | QUE. | 46.280 | -73.380 | 5 |
| ST-GEORGES-DE-MALBAIE | QUE. | 48.650 | -64.200 | 5 |
| ST-GILBERT | QUE. | 46.720 | -71.980 | 5 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ST-HILARION | QUE. | 47.570 | -70.400 | 5 |
| ST-JEAN | QUE. | 45.320 | -73.270 | 5 |
| ST-JEAN-PORT-JOLI | QUE. | 47.220 | -70.270 | 5 |
| ST-JOSEPH-DU-LAC | QUE. | 45.530 | -74.000 | 5 |
| ST-MAURICE | QUE. | 46.470 | -72.530 | 5 |
| ST-STANISLAS-DE-KOSTKA | QUE. | 45.180 | -74.120 | 5 |
| ST-TITE | QUE. | 46.730 | -72.570 | 5 |
| STE-AGATHE-DES-MONTS | QUE. | 46.050 | -74.280 | 5 |
| STE-AGNES-DE-CHARLEVOIX | QUE. | 47.670 | -70.270 | 5 |
| STE-ANASTASIE | QUE. | 46.370 | -71.620 | 5 |
| STE-CLOTHIDE | QUE. | 45.983 | -72.233 | 5 |
| STE-SCHOLASTIQUE | QUE. | 45.650 | -74.090 | 5 |
| TADOUSSAC | QUE. | 48.150 | -69.720 | 5 |
| THETFORD-MINES | QUE. | 46.080 | -71.300 | 5 |
| TROIS-PISTOLES | QUE. | 48.120 | -69.170 | 5 |
| VARENNES | QUE. | 45.680 | -73.430 | 5 |
| WATERLOO | QUE. | 45.350 | -72.520 | 5 |

**INTENSITY 5**
**(UNITED STATES)**

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ATLANTIC CITY | NJ | 39.360 | -74.430 | 5 |
| BLOCK ISLAND | RI | 41.170 | -71.560 | 5 |
| BOSTON | MS | 42.360 | -71.060 | 5 |
| CANTON | NY | 44.590 | -75.170 | 5 |
| CLEVELAND | OH | 41.490 | -81.690 | 5 |
| CONCORD | MS | 43.210 | -71.540 | 5 |
| GRAND RAPIDS | MI | 42.970 | -85.670 | 5 |
| HORNELL | NY | 42.320 | -77.660 | 5 |
| ITHACA | NY | 42.440 | -76.500 | 5 |
| NEW PHILADELPHIA | OH | 40.490 | -81.450 | 5 |
| NEWBERRY | MI | 46.350 | -85.510 | 5 |
| NEWHAVEN | CT | 41.310 | -72.920 | 5 |
| PROVIDENCE | RI | 41.830 | -71.420 | 5 |
| STOCKTON | NY | 42.320 | -79.360 | 5 |
| SYRACUSE | NY | 43.050 | -76.150 | 5 |
| WHITEFISH POINT | MI | 46.750 | -84.980 | 5 |
| WINCHESTER | MS | 42.770 | -72.380 | 5 |

**INTENSITY 4**
**(CANADA)**

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ACTON-VALE | QUE. | 45.650 | -72.570 | 4 |
| AMHERST | N.S. | 45.830 | -64.200 | 4 |
| ANTIGONISH | N.S. | 45.620 | -62.000 | 4 |
| APSLEY | ONT. | 44.750 | -78.100 | 4 |
| ARNPRIOR | ONT. | 45.433 | -76.350 | 4 |
| ASBESTOS | QUE. | 45.770 | -71.930 | 4 |
| AYLMER | ONT. | 42.770 | -80.980 | 4 |
| BAIE DES HA HA | QUE. | 50.970 | -58.940 | 4 |
| BAIE-STE-CATHERINE | QUE. | 48.100 | -69.730 | 4 |
| BAILIEBORO | ONT. | 44.130 | -78.350 | 4 |
| BANCROFT | ONT. | 45.050 | -77.850 | 4 |
| BARRIE | ONT. | 44.400 | -79.667 | 4 |
| BARRYVALE | ONT. | 45.280 | -76.730 | 4 |
| BATH | N.B. | 46.520 | -67.600 | 4 |
| BATHURST | N.B. | 47.600 | -65.650 | 4 |
| BEETON | ONT. | 44.083 | -79.783 | 4 |
| BETHANY | ONT. | 44.183 | -77.017 | 4 |
| BLACKWATER | ONT. | 44.230 | -79.050 | 4 |
| BLENHEIM | ONT. | 42.333 | -82.000 | 4 |
| BRANTFORD | ONT. | 46.800 | -80.270 | 4 |
| BRUCE MINES | ONT. | 46.300 | -83.800 | 4 |
| BUCKINGHAM | QUE. | 45.580 | -75.420 | 4 |
| CALUMET | QUE. | 45.650 | -74.650 | 4 |
| CAMBORNE | ONT. | 44.030 | -78.230 | 4 |
| CAMPBELLFORD | ONT. | 44.300 | -77.800 | 4 |
| CAMPBELLTON | N.B. | 48.000 | -66.670 | 4 |
| CAPREOL | ONT. | 46.720 | -80.930 | 4 |
| CARAQUET | N.B. | 47.780 | -64.950 | 4 |
| CARLETON PLACE | ONT. | 45.130 | -76.150 | 4 |
| CAVAN | ONT. | 44.200 | -78.467 | 4 |
| CHAMBLY | QUE. | 45.450 | -73.280 | 4 |
| CHARETTE | QUE. | 46.450 | -72.930 | 4 |
| CHARLOTTETOWN | P.E.I. | 46.233 | -63.117 | 4 |
| CHARNY | QUE. | 46.717 | -71.267 | 4 |
| CHATHAM | ONT. | 42.400 | -82.183 | 4 |
| CHICOUTIMI | QUE. | 48.430 | -71.070 | 4 |
| COATICOOK | QUE. | 45.130 | -71.800 | 4 |
| COBDEN | ONT. | 45.630 | -76.880 | 4 |
| COBOURG | ONT | 43.967 | -78.167 | 4 |
| COCHRANE | ONT. | 49.067 | -81.017 | 4 |
| COE HILL | ONT. | 44.867 | -77.833 | 4 |
| CORDOVA MINES | ONT. | 44.533 | -77.783 | 4 |
| CORNWALL | ONT. | 45.030 | -74.730 | 4 |
| COURCELLES | QUE. | 45.867 | -70.983 | 4 |
| DALHOUSIE | N.B. | 48.070 | -66.380 | 4 |
| DAVELUYVILLE | QUE. | 46.200 | -72.130 | 4 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| DISRAELI | QUE. | 45.900 | -71.350 | 4 |
| DRUMMONDVILLE | QUE. | 45.880 | -72.480 | 4 |
| EGANVILLE | ONT. | 45.530 | -77.100 | 4 |
| ELGIN | ONT. | 44.600 | -76.220 | 4 |
| EMILY | ONT. | 44.380 | -78.580 | 4 |
| ESPANOLA | ONT. | 46.250 | -81.767 | 4 |
| FARRELLTON | QUE. | 45.750 | -75.920 | 4 |
| FERME-NEUVE | QUE. | 46.700 | -75.450 | 4 |
| FLESHERTON | ONT. | 44.267 | -80.550 | 4 |
| FORESTERS FALLS | ONT. | 45.680 | -76.780 | 4 |
| GASPE | QUE. | 48.830 | -64.480 | 4 |
| GEORGETOWN | P.E.I. | 46.180 | -62.530 | 4 |
| GODERICH | ONT. | 43.750 | -81.720 | 4 |
| GRAVENHURST | ONT. | 44.920 | -79.370 | 4 |
| GUYSBOROUGH | N.S. | 45.380 | -61.500 | 4 |
| HALIBURTON | ONT. | 45.050 | -78.517 | 4 |
| HALLS HARBOUR | N.S. | 45.200 | -64.620 | 4 |
| HAMILTON | ONT. | 43.250 | -79.850 | 4 |
| HAMILTON BEACH | ONT. | 43.280 | -79.780 | 4 |
| HARRISTON | ONT. | 43.900 | -80.883 | 4 |
| HAWKESBURY | ONT. | 45.600 | -74.620 | 4 |
| HERVEY-JONCTION | QUE. | 46.850 | -72.470 | 4 |
| HUNTSVILLE | ONT. | 45.330 | -79.220 | 4 |
| ILE-AUX-NOIX | QUE. | 45.133 | -73.283 | 4 |
| IROQUOIS | ONT. | 44.850 | -75.317 | 4 |
| ISLAND FALLS | ONT. | 49.530 | -81.210 | 4 |
| KAZABAZUA | QUE. | 45.950 | -76.020 | 4 |
| KITCHENER | ONT. | 43.450 | -80.480 | 4 |
| L'ISLET | QUE. | 47.100 | -70.350 | 4 |
| LAC PERIBONKA | QUE. | 50.116 | -71.250 | 4 |
| LACHINE | QUE. | 45.430 | -73.680 | 4 |
| LACHUTE | QUE. | 45.650 | -74.330 | 4 |
| LINDSAY | ONT. | 44.350 | -78.730 | 4 |
| LION'SHEAD | ONT. | 44.983 | -81.250 | 4 |
| LONDON | ONT. | 42.980 | -81.230 | 4 |
| LOTBINIERE | QUE. | 46.620 | -71.930 | 4 |
| LUNENBURG | N.S. | 44.380 | -64.320 | 4 |
| MADDINGTON-FALLS | QUE. | 46.217 | -72.133 | 4 |
| MAITLAND | N.S. | 45.320 | -63.500 | 4 |
| MATANE | QUE. | 48.850 | -67.530 | 4 |
| MCGIVNEY JUNCTION | N.B. | 46.370 | -66.570 | 4 |
| MIDLAND | ONT. | 44.750 | -79.880 | 4 |
| MILLBROOK | ONT. | 44.150 | -78.450 | 4 |
| MILTON | ONT. | 43.520 | -79.880 | 4 |
| MINDEN | ONT. | 44.920 | -78.720 | 4 |
| MONCTON | N.B. | 46.100 | -64.780 | 4 |
| MONTCALM | QUE. | 45.970 | -74.500 | 4 |
| NEW GLASGOW | N.S. | 45.580 | -62.650 | 4 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| NEW HAVEN | N.S. | 46.820 | -60.330 | 4 |
| NEW LISKEARD | ONT. | 47.500 | -79.670 | 4 |
| NEWCASTLE | N.B. | 47.000 | -65.570 | 4 |
| NEWMARKET | ONT. | 44.050 | -79.467 | 4 |
| NIAGARA FALLS | ONT. | 43.100 | -79.070 | 4 |
| NORWOOD | ONT. | 44.380 | -77.980 | 4 |
| OMEMEE | ONT. | 44.300 | -78.550 | 4 |
| ORILLIA | ONT. | 44.617 | -79.417 | 4 |
| OSHAWA | ONT. | 43.900 | -78.850 | 4 |
| OWEN SOUND | ONT. | 44.570 | -80.930 | 4 |
| PAKENHAM | ONT. | 45.330 | -76.280 | 4 |
| PARRSBORO | N.S. | 45.400 | -64.330 | 4 |
| PERIBONCA | QUE. | 48.767 | -72.050 | 4 |
| PERTH-ANDOVER | N.B. | 46.750 | -67.700 | 4 |
| PETERBOROUGH | ONT. | 44.300 | -78.320 | 4 |
| PORT DOVER | ONT. | 42.780 | -80.200 | 4 |
| PORT-CARTIER-OUEST | QUE. | 50.020 | -66.870 | 4 |
| PORTNEUF | QUE. | 46.700 | -71.880 | 4 |
| RICHIBUCTO | N.B. | 46.680 | -64.870 | 4 |
| RICHMOND | QUE. | 45.500 | -72.000 | 4 |
| RIGAUD | QUE. | 45.480 | -74.300 | 4 |
| ROBERVAL | QUE. | 48.517 | -72.217 | 4 |
| ROBINSONVILLE | N.B. | 47.870 | -66.950 | 4 |
| ROSENEATH | ONT. | 44.200 | -78.050 | 4 |
| SACKVILLE | N.B. | 45.900 | -64.370 | 4 |
| SAULT STE MARIE | ONT. | 46.517 | -84.333 | 4 |
| SAYABEC | QUE. | 48.570 | -67.680 | 4 |
| SHARBOT LAKE | ONT. | 44.767 | -76.683 | 4 |
| SHELBURNE | N.S. | 43.770 | -65.320 | 4 |
| SHELBURNE | ONT. | 44.070 | -80.200 | 4 |
| SHUBENACADIE | N.S. | 45.080 | -63.400 | 4 |
| SIMCOE | ONT. | 42.833 | -80.300 | 4 |
| ST CATHARINES | ONT. | 43.170 | -79.250 | 4 |
| ST PETER'S | N.S. | 45.670 | -60.870 | 4 |
| ST THOMAS | ONT. | 42.780 | -81.200 | 4 |
| ST-ADRIEN | QUE. | 45.817 | -71.717 | 4 |
| ST-ALPHONSE | QUE. | 46.180 | -73.700 | 4 |
| ST-ANTOINE-DE-CHARLEVOIX | QUE. | 47.420 | -70.550 | 4 |
| ST-BENJAMIN | QUE. | 46.283 | -70.600 | 4 |
| ST-CAMILLE-DE-BELLECHASSE | QUE. | 46.480 | -70.220 | 4 |
| ST-CASIMIR | QUE. | 46.670 | -72.130 | 4 |
| ST-CLEOPHAS-DE-BRANDON | QUE. | 46.230 | -73.420 | 4 |
| ST-COME | QUE. | 46.270 | -73.780 | 4 |
| ST-ETIENNE-DE-LAUZON | QUE. | 46.650 | -71.300 | 4 |
| ST-GEDEON | QUE. | 48.500 | -71.767 | 4 |
| ST-GEORGE | N.B. | 45.130 | -66.830 | 4 |
| ST-JEAN-DE-DIEU | QUE. | 48.000 | -69.050 | 4 |
| ST-JEAN-DES-PILES | QUE. | 46.683 | -72.733 | 4 |
| ST-JEROME | QUE. | 45.780 | -74.000 | 4 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ST-JULES-DE-BEAUCE | QUE. | 46.217 | -70.950 | 4 |
| ST-LIGUORI | QUE. | 46.020 | -73.570 | 4 |
| ST-MARC-DES-CARRIERES | QUE. | 46.680 | -72.050 | 4 |
| ST-MARCEL-DE-L'ISLET | QUE. | 46.900 | -70.070 | 4 |
| ST-MATHIEU | QUE. | 48.180 | -68.980 | 4 |
| ST-MICHEL-DE-NAPIERVILLE | QUE. | 45.230 | -73.570 | 4 |
| ST-PHILEMON | QUE. | 46.680 | -70.450 | 4 |
| ST-PIERRE-MONTMAGNY | QUE. | 46.920 | -70.630 | 4 |
| ST-ROCH-DE-L'ACHIGAN | QUE. | 45.850 | -73.600 | 4 |
| ST-ROCH-DES-AULNAIES | QUE. | 47.320 | -70.180 | 4 |
| ST-SYLVERE | QUE. | 46.233 | -72.217 | 4 |
| ST-THEOPHILE | QUE. | 45.933 | -70.483 | 4 |
| ST-THOMAS-DE-JOLIETTE | QUE. | 46.020 | -73.350 | 4 |
| ST-UBALDE | QUE. | 46.750 | -72.270 | 4 |
| ST.STEPHEN | N.B. | 45.120 | -67.170 | 4 |
| STE-ADELE | QUE. | 45.950 | -74.130 | 4 |
| STE-AGATHE-DES-MONTS | QUE. | 46.050 | -74.280 | 4 |
| STE-AGNES-DE-CHARLEVOIX | QUE. | 47.670 | -70.270 | 4 |
| STE-ANGELE-DE-LAVAL | QUE. | 46.333 | -72.517 | 4 |
| STE-CROIX | QUE. | 46.617 | -71.733 | 4 |
| STE-VERONIQUE | QUE. | 46.520 | -74.980 | 4 |
| SUDBURY | ONT. | 46.500 | -81.000 | 4 |
| SULLY | QUE. | 47.450 | -69.150 | 4 |
| TASCHEREAU | QUE. | 48.670 | -78.680 | 4 |
| TERREBONNE | QUE. | 45.700 | -73.630 | 4 |
| TIGNISH | P.E.I. | 46.950 | -64.030 | 4 |
| TIMMINS | ONT. | 48.467 | -81.333 | 4 |
| TORONTO | ONT. | 43.667 | -79.383 | 4 |
| TRACADIE | N.B. | 47.520 | -64.900 | 4 |
| UXBRIDGE | ONT. | 44.100 | -79.120 | 4 |
| VICTORIAVILLE | QUE. | 46.050 | -71.967 | 4 |
| WAKEFIELD | QUE. | 45.630 | -75.930 | 4 |
| WARKWORTH | ONT. | 44.200 | -77.880 | 4 |
| WEBBWOOD | ONT. | 46.267 | -81.883 | 4 |
| WILBERFORCE | ONT. | 45.033 | -78.217 | 4 |
| WILLIAMSBURG | ONT. | 43.400 | -80.500 | 4 |
| WINDIGO | QUE. | 47.767 | -73.333 | 4 |
| WOLFVILLE | N.S. | 45.080 | -64.370 | 4 |

**INTENSITY 4**
**(UNITED STATES)**

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| AMHERST | MA | 42.380 | -72.520 | 4 |
| BEAVER FALLS | PA | 40.750 | -80.320 | 4 |
| BEDFORD | NH | 42.950 | -71.520 | 4 |
| BINGHAMTON | NY | 42.100 | -75.910 | 4 |
| BRIDGETON | NJ | 39.430 | -75.240 | 4 |
| BUFFALO | NY | 42.890 | -78.880 | 4 |
| CANTON | OH | 40.800 | -81.380 | 4 |
| CATHANCE | ME | 43.960 | -69.930 | 4 |
| CATTARAUGUS | NY | 42.280 | -78.690 | 4 |
| CHARLESTOWN | RI | 41.380 | -71.640 | 4 |
| CHICAGO | IL | 41.880 | -87.630 | 4 |
| CLAYTON | NJ | 39.660 | -75.090 | 4 |
| COLUMBUS | OH | 39.960 | -83.000 | 4 |
| CORTLAND | NY | 42.600 | -76.180 | 4 |
| DAYTON | OH | 39.750 | -84.180 | 4 |
| DETROIT | MI | 42.330 | -83.050 | 4 |
| EASTPORT | ME | 44.910 | -67.000 | 4 |
| ENGLEWOOD | NJ | 40.900 | -73.970 | 4 |
| ERIE | PA | 42.060 | -80.070 | 4 |
| GOWANDA | NY | 42.460 | -78.940 | 4 |
| GRAND HAVEN | MI | 43.060 | -86.220 | 4 |
| GREENVILLE | ME | 45.460 | -69.590 | 4 |
| GROTON | NY | 42.590 | -76.370 | 4 |
| HANOVER | NH | 43.700 | -72.290 | 4 |
| HARTFORD | CT | 41.800 | -72.720 | 4 |
| HIGHTSTOWN | NJ | 40.270 | -74.520 | 4 |
| LANSING | MI | 42.730 | -84.550 | 4 |
| MARQUETTE | MI | 46.450 | -87.620 | 4 |
| MINETTO | NY | 43.400 | -76.470 | 4 |
| NANTUCKET | MA | 41.280 | -70.100 | 4 |
| NEW YORK | NY | 40.780 | -73.970 | 4 |
| NEWPORT | NH | 43.370 | -72.170 | 4 |
| OIL CITY | PA | 41.430 | -79.710 | 4 |
| OLEAN | NY | 42.080 | -78.430 | 4 |
| ONEONTA | NY | 42.450 | -75.060 | 4 |
| ORONO | ME | 44.880 | -68.670 | 4 |
| OWEGO | NY | 42.110 | -76.260 | 4 |
| PITTSBURGH | PA | 40.440 | -80.000 | 4 |
| POINT PLEASANT | NY | 43.230 | -77.550 | 4 |
| PORT HURON | MI | 42.970 | -82.430 | 4 |
| PORT JEFFERSON | NY | 40.940 | -73.060 | 4 |
| READING | PA | 40.340 | -75.930 | 4 |
| ROCHESTER | NY | 43.160 | -77.610 | 4 |
| SAINT ALBANS | VT | 44.810 | -73.090 | 4 |
| SALAMANCA | NY | 42.160 | -78.710 | 4 |
| SARATOGA SPRINGS | NY | 43.080 | -73.780 | 4 |

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| SAULT STE MARIE | MI | 46.490 | -84.350 | 4 |
| SPRINGVILLE | NY | 42.510 | -78.670 | 4 |
| TRENTON | NJ | 40.220 | -74.760 | 4 |
| TROY | NY | 42.740 | -73.680 | 4 |
| VINELAND | NJ | 39.490 | -75.030 | 4 |
| WHEELING | WV | 40.050 | -80.820 | 4 |
| WILLIAMSTOWN | MA | 42.710 | -73.200 | 4 |

**INTENSITY 3**
**(CANADA)**

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ACTON | ONT. | 43.617 | -80.033 | 3 |
| ALLISTON | ONT. | 44.150 | -79.870 | 3 |
| ALMA | N.B. | 45.600 | -64.950 | 3 |
| ALMONTE | ONT. | 45.230 | -76.200 | 3 |
| AURORA | ONT. | 44.000 | -79.470 | 3 |
| AYLMER | QUE. | 45.430 | -75.830 | 3 |
| BADDECK | N.S. | 46.100 | -60.750 | 3 |
| BARRIVER | ONT. | 46.430 | -84.030 | 3 |
| BEAMSVILLE | ONT. | 43.167 | -79.483 | 3 |
| BEAUCEVILLE-EST | QUE. | 46.200 | -70.770 | 3 |
| BELLEVILLE | ONT. | 44.170 | -77.380 | 3 |
| BRACEBRIDGE | ONT. | 45.050 | -79.170 | 3 |
| BRAMPTON | ONT. | 43.680 | -79.770 | 3 |
| BRIDGETOWN | N.S. | 44.850 | -65.300 | 3 |
| BRIGHTON | ONT. | 44.033 | -77.733 | 3 |
| BROCKVILLE | ONT. | 44.580 | -75.680 | 3 |
| CHAMBORD | QUE. | 48.433 | -72.067 | 3 |
| CHAPLEAU | ONT. | 47.833 | -83.400 | 3 |
| CHATHAM | N.B. | 47.030 | -65.470 | 3 |
| CHESTERVILLE | ONT. | 45.100 | -75.230 | 3 |
| CHISASIBI | QUE. | 53.833 | -79.000 | 3 |
| CHUTE-DES-PASSES | QUE. | 50.000 | -71.580 | 3 |
| COLLINGWOOD | ONT. | 44.480 | -80.220 | 3 |
| DIGBY | N.S. | 44.620 | -65.770 | 3 |
| DON MILLS | ONT. | 43.730 | -79.330 | 3 |
| DORCHESTER | N.B. | 45.900 | -64.520 | 3 |
| FENELON FALLS | ONT. | 44.533 | -78.750 | 3 |
| FREDERICTON | N.B. | 45.950 | -66.670 | 3 |
| GASPE | QUE. | 48.830 | -64.480 | 3 |
| GEORGETOWN | ONT. | 43.650 | -79.920 | 3 |
| GOGAMA | ONT. | 47.667 | -81.717 | 3 |
| GUYSBOROUGH | N.S. | 45.380 | -61.500 | 3 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| HAILEYBURY | ONT. | 47.450 | -79.630 | 3 |
| HALIFAX | N.S. | 44.650 | -63.600 | 3 |
| HASTINGS | ONT. | 44.300 | -77.950 | 3 |
| HAVELOCK | ONT. | 44.430 | -77.880 | 3 |
| HEARST | ONT. | 49.683 | -83.667 | 3 |
| HERVEY-JONCTION | QUE. | 46.850 | -72.470 | 3 |
| HULL | QUE. | 45.430 | -75.730 | 3 |
| IDA | ONT. | 44.220 | -78.480 | 3 |
| INDIAN CHUTE FALLS | ONT. | 47.850 | -82.450 | 3 |
| IRON BRIDGE | ONT. | 46.283 | -83.233 | 3 |
| KINCARDINE | ONT. | 44.183 | -81.633 | 3 |
| KINGSTON | ONT. | 44.230 | -76.500 | 3 |
| KINMOUNT | ONT. | 44.783 | -78.650 | 3 |
| KORAH | ONT. | 46.550 | -84.400 | 3 |
| LEAMINGTON | ONT. | 42.050 | -82.600 | 3 |
| LISTOWEL | ONT. | 43.733 | -80.950 | 3 |
| LITTLE CURRENT | ONT. | 45.967 | -81.933 | 3 |
| MASSEY | ONT. | 46.200 | -82.083 | 3 |
| MATTAWA | ONT. | 46.320 | -78.700 | 3 |
| MEAFORD | ONT. | 44.600 | -80.580 | 3 |
| MILLTOWN | N.B. | 45.120 | -67.340 | 3 |
| MISERE | QUE. | 47.467 | -70.400 | 3 |
| MONTEBELLO | QUE. | 45.650 | -74.930 | 3 |
| MOOSE FACTORY | ONT. | 51.267 | -80.617 | 3 |
| NATASHQUAN | QUE. | 50.200 | -61.820 | 3 |
| NEW GLASGOW | N.S. | 45.580 | -62.650 | 3 |
| NEW HAVEN | N.S. | 46.820 | -60.330 | 3 |
| NEWBORO | ONT. | 44.650 | -76.317 | 3 |
| NICOLET | QUE. | 46.217 | -72.617 | 3 |
| NORFOLK | ONT. | 42.720 | -80.580 | 3 |
| PALMERSTON | ONT. | 43.833 | -80.850 | 3 |
| PARIS | ONT. | 43.200 | -80.383 | 3 |
| PERTH | ONT. | 44.900 | -76.250 | 3 |
| PICTOU | N.S. | 45.680 | -62.720 | 3 |
| PORT DOVER | ONT. | 42.780 | -80.200 | 3 |
| PORT STANLEY | ONT. | 42.667 | -81.217 | 3 |
| RUPERT HOUSE | QUE. | 51.580 | -78.750 | 3 |
| SALMON RIVER | N.S. | 44.050 | -66.170 | 3 |
| SARNIA | ONT. | 42.967 | -82.383 | 3 |
| SENNETERRE | QUE. | 48.380 | -77.230 | 3 |
| SHELBURNE | N.S. | 43.770 | -65.320 | 3 |
| SMITHS FALLS | ONT. | 44.900 | -76.017 | 3 |
| ST CROIX | N.S. | 44.970 | -64.030 | 3 |
| ST PETER'S | N.S. | 45.670 | -60.870 | 3 |
| ST-ADALBERT | QUE. | 46.850 | -69.900 | 3 |
| ST-AUBERT | QUE. | 47.180 | -70.220 | 3 |
| ST-BRUNO-LAC-ST-JEAN | QUE. | 48.470 | -71.650 | 3 |
| ST-JOVITE | QUE. | 46.120 | -74.600 | 3 |
| ST-YVON | QUE. | 49.170 | -64.800 | 3 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ST.JOHN | N.B. | 45.270 | -66.050 | 3 |
| STE-FAMILLE-D'AUMOND | QUE. | 46.470 | -75.880 | 3 |
| STRATFORD | ONT. | 43.367 | -80.950 | 3 |
| TROIS-PISTOLES | QUE. | 48.120 | -69.170 | 3 |
| TRURO | N.S. | 45.360 | -63.260 | 3 |
| UNO PARK | ONT. | 47.580 | -79.750 | 3 |
| WELLAND | ONT. | 42.983 | -79.250 | 3 |
| WHITBY | ONT. | 43.870 | -78.930 | 3 |
| WIARTON | ONT. | 44.917 | -81.150 | 3 |
| WILBERFORCE | ONT. | 45.033 | -78.217 | 3 |
| WINDSOR | N.S. | 44.980 | -64.130 | 3 |
| WINDSOR | ONT. | 42.300 | -83.020 | 3 |
| WOODSTOCK | ONT. | 43.133 | -80.750 | 3 |

**INTENSITY 3**
**(UNITED STATES)**

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ADRIAN | MI | 41.900 | -84.040 | 3 |
| AKRON | OH | 41.080 | -81.520 | 3 |
| ANDERSON | IN | 40.110 | -85.680 | 3 |
| ASBURY PARK | NJ | 40.220 | -74.010 | 3 |
| BAY CITY | MI | 43.600 | -83.890 | 3 |
| BOSTON | NY | 42.630 | -78.740 | 3 |
| CAMBRIDGE | MA | 42.370 | -71.120 | 3 |
| CINCINNATI | OH | 39.110 | -84.510 | 3 |
| DRYDEN | NY | 42.490 | -76.300 | 3 |
| ELMWOOD PLACE | OH | 39.190 | -84.490 | 3 |
| ESCANABA | MI | 45.750 | -87.070 | 3 |
| FLINT | MI | 43.010 | -83.690 | 3 |
| HASTINGS | MI | 42.650 | -85.290 | 3 |
| KRUMS | NY | 42.480 | -76.580 | 3 |
| LA CROSSE | WI | 43.900 | -91.170 | 3 |
| LOUISVILLE | KY | 38.250 | -85.760 | 3 |
| LUDINGTON | MI | 43.960 | -86.450 | 3 |
| MARION | OH | 40.590 | -83.130 | 3 |
| MARION | IN | 39.590 | -85.760 | 3 |
| MILWAUKEE | WI | 43.030 | -87.910 | 3 |
| NEWARK | NJ | 40.740 | -74.180 | 3 |
| NIAGARA FALLS | NY | 43.080 | -79.020 | 3 |
| OSWEGO | NY | 43.460 | -76.510 | 3 |
| PHILADELPHIA | PA | 39.950 | -75.160 | 3 |
| PHILO | OH | 39.860 | -81.910 | 3 |
| PLAINFIELD | NJ | 40.620 | -74.420 | 3 |

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| PULASKI | NY | 43.570 | -76.130 | 3 |
| RUTLAND | VT | 43.610 | -72.980 | 3 |
| SAGINAW | MI | 43.350 | -84.040 | 3 |
| SCARSDALE | NY | 40.990 | -73.800 | 3 |
| SOUTH BEND | IN | 41.680 | -86.260 | 3 |
| TERRE HAUTE | IN | 39.470 | -87.400 | 3 |
| TITUSVILLE | PA | 41.630 | -79.670 | 3 |
| WEST SLAT.ERVILLE | NY | 42.390 | -76.360 | 3 |
| YOUNGSTOWN | OH | 41.110 | -80.650 | 3 |

**INTENSITY 2**
**(CANADA)**

| ADDRESS | PROV | LAT. | LONG. | INT. |
|---|---|---|---|---|
| AGAWA | ONT. | 47.670 | -84.500 | 2 |
| FERGUS | ONT. | 43.700 | -80.370 | 2 |
| FORT ALBANY | ONT. | 52.200 | -81.667 | 2 |
| PORT ROWAN | ONT. | 42.617 | -80.467 | 2 |

**INTENSITY 2**
**(UNITED STATES)**

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ALFRED | NY | 42.250 | -77.790 | 2 |
| ALPENA | MI | 45.060 | -83.440 | 2 |
| ANN ARBOR | MI | 42.280 | -83.750 | 2 |
| ATHENS | OH | 39.370 | -82.010 | 2 |
| BALTIMORE | MD | 39.470 | -76.620 | 2 |
| BATTLE CREEK | MI | 42.310 | -85.170 | 2 |
| BAYONNE | NJ | 40.670 | -74.110 | 2 |
| BELLEPLAIN | NJ | 39.270 | -74.870 | 2 |
| BELVIDERE | NJ | 40.830 | -75.080 | 2 |
| BOONTON | NJ | 40.900 | -74.410 | 2 |
| BRANCHVILLE | NJ | 41.150 | -74.750 | 2 |
| CAIRO | IL | 37.000 | -89.180 | 2 |
| CAPE HENRY | VA | 36.930 | -76.010 | 2 |
| CAPE MAY | NJ | 38.930 | -74.920 | 2 |
| CHAPEL HILL | NC | 35.910 | -79.050 | 2 |
| CHARLES CITY | IA | 43.070 | -92.670 | 2 |

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| CHARLOTTEBURG | NJ | 41.030 | -74.420 | 2 |
| CHATHAM | NJ | 40.740 | -74.380 | 2 |
| DES MOINES | IA | 41.590 | -93.600 | 2 |
| DUBUQUE | IA | 42.500 | -90.670 | 2 |
| ELIZABETH | NJ | 40.670 | -74.220 | 2 |
| ELKINS | WV | 38.920 | -79.850 | 2 |
| EVANSVILLE | IN | 37.970 | -87.570 | 2 |
| FLEMINGTON | NJ | 40.510 | -74.860 | 2 |
| FORTAYNE | IN | 41.080 | -85.130 | 2 |
| FULTON | NY | 43.320 | -76.410 | 2 |
| GREEN BAY | WI | 44.510 | -88.010 | 2 |
| HARRISBURG | PA | 40.270 | -76.870 | 2 |
| HOUGHTON | MI | 47.120 | -88.580 | 2 |
| INDIANAPOLIS | IN | 39.770 | -86.150 | 2 |
| INLET VALLEY | NY | 42.410 | -76.540 | 2 |
| KEOKUK | IA | 40.400 | -91.390 | 2 |
| KOKOMO | IN | 40.480 | -86.120 | 2 |
| LAKEWOOD | NJ | 40.090 | -74.220 | 2 |
| LAWRENCE | KS | 38.960 | -95.240 | 2 |
| LAYTON | NJ | 41.220 | -74.820 | 2 |
| LEXINGTON | KY | 38.050 | -84.500 | 2 |
| LITTLE FALLS | NJ | 40.880 | -74.230 | 2 |
| LOGANSPORT | IN | 40.750 | -86.370 | 2 |
| MADISON | WI | 43.070 | -89.390 | 2 |
| MANISTEE | MI | 44.250 | -86.320 | 2 |
| MANITOWAC | WI | 44.080 | -87.660 | 2 |
| MINNEAPOLIS | MN | 44.980 | -93.260 | 2 |
| MOORESTOWN | NJ | 39.960 | -74.950 | 2 |
| MOUNT VERNON | IA | 41.920 | -91.420 | 2 |
| NORFOLK | VA | 36.900 | -76.250 | 2 |
| NORWALK | OH | 41.240 | -82.610 | 2 |
| OSHKOSH | WI | 44.020 | -88.52 | 2 |
| OVERLEA | MD | 39.360 | -76.520 | 2 |
| PARKERSBURG | WV | 39.270 | -81.560 | 2 |
| PATERSON | NJ | 40.910 | -74.170 | 2 |
| PEORIA | IL | 40.690 | -89.590 | 2 |
| PHILLIPSBURG | NJ | 40.690 | -75.190 | 2 |
| PRINCETON | NJ | 40.350 | -74.660 | 2 |
| RICHMOND | VA | 37.950 | -76.730 | 2 |
| ROYAL CENTER | IN | 40.870 | -86.500 | 2 |
| SANDUSKY | OH | 41.380 | -83.060 | 2 |
| SIOUX CITY | IA | 42.500 | -96.400 | 2 |
| SOMERVILLE | NJ | 40.570 | -74.610 | 2 |
| SPARLAND | IL | 41.030 | -89.440 | 2 |
| SPRINGFIELD | IL | 39.800 | -89.650 | 2 |
| ST LOUIS | MO | 38.650 | -90.250 | 2 |
| STEVENS POINT | WI | 44.520 | -89.580 | 2 |
| SUSSEX | NJ | 41.130 | -74.690 | 2 |
| TOLEDO | OH | 41.650 | -83.530 | 2 |

| ADDRESS | STATE | LAT. | LONG. | INT. |
|---|---|---|---|---|
| TOWANDA | PA | 41.770 | -76.440 | 2 |
| URBANA | IL | 40.110 | -88.210 | 2 |
| WASHINGTON | DC | 38.890 | -77.010 | 2 |
| WAUSAU | WI | 44.960 | -89.630 | 2 |
| WEST LAFAYETTE | IN | 40.430 | -86.910 | 2 |
| WILLIAMS BAY | WI | 42.570 | -88.550 | 2 |

**INTENSITY F (NO OTHER INFORMATION GIVEN)**
**(CANADA ONLY)**

| ADDRESS | PROV | LAT. | LONG. | INT. |
|---|---|---|---|---|
| ALLANDALE | ONT. | 44.380 | -79.680 | F |
| BLACKWATER | ONT. | 44.230 | -79.050 | F |
| BLIND RIVER | ONT. | 46.167 | -82.967 | F |
| COBALT | ONT. | 47.400 | -79.683 | F |
| KEENE | ONT. | 44.250 | -78.170 | F |
| LANCASTER | ONT. | 45.130 | -74.500 | F |
| LOMOND | NFLD | 49.470 | -57.770 | F |
| ST-CHRYSOSTOME | QUE. | 45.100 | -73.770 | F |
| ST-VALLIER | QUE. | 46.880 | -70.820 | F |
| THESSALON | ONT. | 46.250 | -83.567 | F |

**INTENSITY 0 (NOT FELT)**
**(CANADA ONLY)**

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| AMHERSTBURG | ONT. | 42.100 | -83.100 | 0 |
| BALA | ONT. | 45.017 | -79.617 | 0 |
| BEAVERTON | ONT. | 44.430 | -79.150 | 0 |
| FENELON FALLS | ONT. | 44.533 | -78.750 | 0 |
| FLINT | ONT. | 48.333 | -89.683 | 0 |
| FORT FRANCES | ONT. | 48.600 | -93.400 | 0 |
| LAKEFIELD | QUE. | 45.750 | -74.250 | 0 |
| LEPREAU | N.B. | 45.170 | -66.470 | 0 |
| LIVERPOOL | N.S. | 44.030 | -64.720 | 0 |
| LORNEVILLE | ONT. | 44.500 | -79.000 | 0 |
| LOUISBOURG | N.S. | 45.920 | -59.970 | 0 |
| NICHOLSON SIDING | ONT. | 47.950 | -83.767 | 0 |
| NIPIGON | ONT. | 49.017 | -88.267 | 0 |

| ADDRESS | PROV. | LAT. | LONG. | INT. |
|---|---|---|---|---|
| PORT CREDIT | ONT. | 43.550 | -79.583 | 0 |
| PORT SEVERN | ONT. | 44.800 | -79.717 | 0 |
| SWASTIKA | ONT. | 48.030 | -80.010 | 0 |
| TAMWORTH | ONT. | 44.483 | -77.000 | 0 |
| THUNDER BAY | ONT. | 48.400 | -89.317 | 0 |
| WIARTON | ONT. | 44.917 | -81.150 | 0 |

## Appendix E

### INTENSITY 6
### (U.S.)

| PLACE | STATE | INT |
|---|---|---|
| ALBANY | NY | 6 |
| BURLINGTON | VT | 6 |
| PORTLAND | ME | 6 |

### INTENSITY 5
### (U.S.)

| PLACE | STATE | INT |
|---|---|---|
| ATLANTIC CITY | NJ | 5 |
| BLOCK ISLAND | RI | 5 |
| BOSTON | MS | 5 |
| CANTON | NY | 5 |
| CLEVELAND | OH | 5 |
| CONCORD | MS | 5 |
| GRAND RAPIDS | MI | 5 |
| HORNELL | NY | 5 |
| ITHACA | NY | 5 |
| NEW PHILADELPHIA | OH | 5 |
| NEWBERRY | MI | 5 |
| NEWHAVEN | CT | 5 |
| PROVIDENCE | RI | 5 |
| STOCKTON | NY | 5 |
| SYRACUSE | NY | 5 |
| WHITEFISH POINT | MI | 5 |
| WINCHESTER | MS | 5 |

### INTENSITY 4
### (U.S.)

| PLACE | STATE | INT |
|---|---|---|
| AMHERST | MA | 4 |
| BEAVERFALLS | PA | 4 |
| BEDFORD | NH | 4 |
| BINGHAMTON | NY | 4 |
| BRIDGETON | NJ | 4 |

| | | |
|---|---|---|
| BUFFALO | NY | 4 |
| CANTON | OH | 4 |
| CATHANCE | ME | 4 |
| CATTARAUGUS | NY | 4 |
| CHARLESTOWN | RI | 4 |
| CHICAGO | IL | 4 |
| CLAYTON | NJ | 4 |
| COLUMBUS | OH | 4 |
| CORTLAND | NY | 4 |
| DAYTON | OH | 4 |
| DETROIT | MI | 4 |
| EASTPORT | ME | 4 |
| ENGLEWOOD | NJ | 4 |
| ERIE | PA | 4 |
| GOWANDA | NY | 4 |
| GRAND HAVEN | MI | 4 |
| GREENVILLE | ME | 4 |
| GROTON | NY | 4 |
| HANOVER | NH | 4 |
| HARTFORD | CT | 4 |
| HIGHTSTOWN | NJ | 4 |
| LANSING | MI | 4 |
| MARQUETTE | MI | 4 |
| MINETTO | NY | 4 |
| NANTUCKET | MA | 4 |
| NEWYORK | NY | 4 |
| NEWPORT | NH | 4 |
| OIL CITY | PA | 4 |
| OLEAN | NY | 4 |
| ONEONTA | NY | 4 |
| ORONO | ME | 4 |
| OWEGO | NY | 4 |
| PITTSBURGH | PA | 4 |
| POINT PLEASANT | NY | 4 |
| PORT HURON | MI | 4 |
| PORT JEFFERSON | NY | 4 |
| READING | PA | 4 |
| ROCHESTER | NY | 4 |
| SAINT ALBANS | VT | 4 |
| SALAMANCA | NY | 4 |
| SARATOGA SPRINGS | NY | 4 |
| SAULT STE MARIE | MI | 4 |
| SPRINGVILLE | NY | 4 |
| TRENTON | NJ | 4 |
| TROY | NY | 4 |
| VINELAND | NJ | 4 |
| WHEELING | WV | 4 |
| WILLIAMSTOWN | MA | 4 |

**INTENSITY3**
**(U.S.)**

| PLACE | START | INT |
|---|---|---|
| ADRIAN | MI | 3 |
| AKRON | OH | 3 |
| ANDERSON | IN | 3 |
| ASBURY PARK | NJ | 3 |
| BAY CITY | MI | 3 |
| BOSTON | NY | 3 |
| CAMBRIDGE | MA | 3 |
| CINCINNATI | OH | 3 |
| DRYDEN | NY | 3 |
| ELMWOOD PLACE | OH | 3 |
| ESCANABA | MI | 3 |
| FLINT | MI | 3 |
| HASTINGS | MI | 3 |
| KRUMS CORNER | NY | 3 |
| LACROSSE | WI | 3 |
| LOUISVILLE | KY | 3 |
| LUDINGTON | MI | 3 |
| MARION | OH | 3 |
| MARION | IN | 3 |
| MILWAUKEE | WI | 3 |
| NEWARK | NJ | 3 |
| NIAGARA FALLS | NY | 3 |
| OSWEGO | NY | 3 |
| PHILADELPHIA | PA | 3 |
| PHILO | OH | 3 |
| PLAINFIELD | NJ | 3 |
| PULASKI | NY | 3 |
| RUTLAND | VT | 3 |
| SAGINAW | MI | 3 |
| SCARSDALE | NY | 3 |
| SOUTH BEND | IN | 3 |
| TERRE HAUTE | IN | 3 |
| TITUSVILLE | PA | 3 |
| WEST SLATERVILLE | NY | 3 |
| YOUNGSTOWN | OH | 3 |

**INTENSITY 2**
**(U.S.)**

| PLACE | START | INT |
|---|---|---|
| ALFRED | NY | 2 |
| ALPENA | MI | 2 |
| ANN ARBOR | MI | 2 |
| ATHENS | OH | 2 |
| BALTIMORE | MD | 2 |
| BATTLE CREEK | MI | 2 |
| BAYONNE | NJ | 2 |
| BELLEPLAIN | NJ | 2 |
| BELVIDERE | NJ | 2 |
| BOONTON | NJ | 2 |
| BRANCHVILLE | NJ | 2 |
| CAIRO | IL | 2 |
| CAPE HENRY | VA | 2 |
| CAPE MAY | NJ | 2 |
| CHAPEL HILL | NC | 2 |
| CHARLES CITY | IA | 2 |
| CHARLOTTEBURG | NJ | 2 |
| CHATHAM | NJ | 2 |
| DESMOINES | IA | 2 |
| DUBUQUE | IA | 2 |
| ELIZABETH | NJ | 2 |
| ELKINS | WV | 2 |
| EVANSVILLE | IN | 2 |
| FLEMINGTON | NJ | 2 |
| FORTAYNE | IN | 2 |
| FULTON | NY | 2 |
| GREEN BAY | WI | 2 |
| HARRISBURG | PA | 2 |
| HOUGHTON | MI | 2 |
| INDIANAPOLIS | IN | 2 |
| INLET VALLEY | NY | 2 |
| KEOKUK | IA | 2 |
| KOKOMO | IN | 2 |
| LAKEWOOD | NJ | 2 |
| LAWRENCE | KS | 2 |
| LAYTON | NJ | 2 |
| LEXINGTON | KY | 2 |
| LITTLE FALLS | NJ | 2 |
| LOGANS PORT | IN | 2 |
| MADISON | WI | 2 |
| MANISTEE | MI | 2 |
| MANITOWAC | WI | 2 |
| MINNEAPOLIS | MN | 2 |
| MOORESTOWN | NJ | 2 |

| | | |
|---|---|---|
| MOUNT VERNON | IA | 2 |
| NORFOLK | VA | 2 |
| NORWALK | OH | 2 |
| OSHKOSH | WI | 2 |
| OVERLEA | MD | 2 |
| PARKERSBURG | WV | 2 |
| PATERSON | NJ | 2 |
| PEORIA | IL | 2 |
| PHILLIPSBURG | NJ | 2 |
| PRINCETON | NJ | 2 |
| RICHMOND | VA | 2 |
| ROYAL CENTER | IN | 2 |
| SANDUSKY | OH | 2 |
| SIOUX CITY | IA | 2 |
| SOMERVILLE | NJ | 2 |
| SPARLAND | IL | 2 |
| SPRINGFIELD | IL | 2 |
| ST LOUIS | MO | 2 |
| STEVENS POINT | WI | 2 |
| SUSSEX | NJ | 2 |
| TOLEDO | OH | 2 |
| TOWANDA | PA | 2 |
| URBANA | IL | 2 |
| WASHINGTON | DC | 2 |
| WAUSAU | WI | 2 |
| WEST LAFAYETTE | IN | 2 |
| WILLIAMS BAY | WI | 2 |

Appendix F

Database chx250301

| code | address | int | com | eqid |
|---|---|---|---|---|
| L0P 1R0 | ACTON | 3 | ACTON FREE PRESS; P 2; RF 3 | 250301 |
| J0H 1A0 | ACTON-VALE | 4 | LA PRESSE P 70; RF 5 | 250301 |
| PPP AGA | AGAWA | 2 | SWAYING MOTION; SAULT STE MARIE NEWSPAPE; P 2 RF 5 | 250301 |
| K0B 1A0 | ALFRED | 6 | FIRE MAR 8 DUE TO CHMY CDKD IN EQ; ENTRY 182 | 250301 |
| LLL ALL | ALLANDALE | F | CAN PRESS | 250301 |
| L0M 1A0 | ALLISTON | 3 | MAYBE 4; ALLISTON HERALD ; P 2; RF 6 | 250301 |
| E0A 1B0 | ALMA | 3 | RF 2; entry#1 | 250301 |
| K0A 1A0 | ALMONTE | 3 | ALMONTE GAZETTE, P 2; RF 4 | 250301 |
| B4H 4A1 | AMHERST | 4 | DISHES, WINDOWS RATTLED; MONCTON DAILY TIMES, P 1; RF 4 | 250301 |
| N9V 2Z3 | AMHERSTBURG | 0 | TWO REPLIES; RF 1; ENT#93 | 250301 |
| J9T 2G1 | AMOS | 5 | FURNITURE MOVED, P69, RF 6 | 250301 |
| JJJ ANG | ANGELINE | 5 | LIGHTS EXTINGUISHED; GREAT FRIGHT LA PRESSE P71; RF 6 | 250301 |
| B0S 1A0 | ANNAPOLIS ROYAL | 5 | CLOCKS STOPPED, THINGS FELL HALIFAX HERALD MAR 1; P3 | 250301 |
| B2G 2C4 | ANTIGONISH | 4 | HALIFAX HERAL, P2 ; RF 5 | 250301 |
| K0L 1A0 | APSLEY | 4 | PETERBOROUGH EXAM; P46; RF 3 | 250301 |
| K7S 3H4 | ARNPRIOR | 4 | MONTREAL DAILY STAR MAR 2 ALSO OTTAWA JOURNAL | 250301 |
| J1T 3M9 | ASBESTOS | 4 | LA PRESSE; P71; RF 5 | 250301 |
| L4G 3L8 | AURORA | 3 | MAYBE 4 ; AURORA BANNER;P 3; RF 5; QUESTIONNAIRE V 3 P 108; | 250301 |
| N5H 1J7 | AYLMER | 4 | AYLMER EXPRESS; P 3;RF 5 (ONTARIO ) | 250301 |
| J9H 3M3 | AYLMER | 3 | OTTAWA JOURNAL MAR 2 | 250301 |
| B0E 1B0 | BADDECK | 3 | RF 4; ENTRY#9 | 250301 |
| GGG BAI | BAIE DES HA HA | 4 | FELT STRONGLY ENTRY 298 | 250301 |
| G0A 1B0 | BAIE-ST-PAUL | 6 | HEAVY FURNITURE MOVED; P251 | 250301 |
| G0A 1B0 | BAIE-ST-PAUL | 7 | CHURCH BELLS OUT OF POS;CRCKD PLSTR;ENTRY 241 | 250301 |
| G0A 1B0 | BAIE-ST-PAUL | 6 | CHIMNEY CRACKED;RF 5;ENTRY#23 AND 248 | 250301 |
| G0T 1A0 | BAIE-STE-CATHERINE | 4 | RF 3;ENTRY#64 | 250301 |
| K0L 1B0 | BAILIEBORO | 4 | NP CLIPPING P46; RF 4 | 250301 |
| P0C 1A0 | BALA | 0 | RF 1; ENT#94 | 250301 |
| K0L 1C0 | BANCROFT | 4 | RUMBLING SOUND;RF2; ENT#95 ALSO BANCROFT DAILY TIMES | 250301 |
| PPP BAR | BAR RIVER | 3 | LOCAL PAPER; P 4; RF 3 | 250301 |
| J0Y 1A0 | BARRAUTE | 6 | CHURCH BELLS RANG P 69 LA PRESSE | 250301 |
| L4M 4T5 | BARRIE | 4 | BARRIE EXAMINER; P 4 RF 4; ALSO HAM SPECTATOR | 250301 |
| KKK BAR | BARRYVALE | 4 | RF 3; ENT#96 | 250301 |
| E0J 1E0 | BATH | 4 | EDMUNDSTON OBSERVER; P 4 RF 3 | 250301 |
| E2A 3Z1 | BATHURST | 4 | CANADIAN PRESS ;ALSO MONCTON DAILY TIMES MAR 1; RF 3; P 4 | 250301 |
| L0R 1B0 | BEAMSVILLE | 3 | BEAMSVILLE EXPRESS; P 4; RF 2 | 250301 |
| G0S 1A0 | BEAUCEVILLE-EST | 3 | NOISE LIKE CAR; RF 2; ENT #97 | 250301 |
| G0M 1A0 | BEAUCEVILLE-OUEST | 6 | ENT 98; ALSO L'ECLAIREUR P 73; RF 6 | 250301 |

| | | | | | |
|---|---|---|---|---|---|
| G1E 1Y5 | BEAUPORT | 7 | DAMAGE AT HOSPITAL; LA PATRIE P 76 | 250301 |
| L0K 1A0 | BEAVERTON | 0 | LOCAL PAPER; P 5; RF 1 | 250301 |
| J0B 1E0 | BEEBE | 5 | MAYBE MORE; LA PRESSE, P69 RF 5 | 250301 |
| L0G 1A0 | BEETON | 4 | FELL FROM SHELVES;RF 3; ENT #99 | 250301 |
| K8N 2Y8 | BELLEVILLE | 3 | THE DAILY ONTARIO; P 5; RF 3 | 250301 |
| J0K 1A0 | BERTHIERVILLE | 5 | LA PRESSE; RF 6 | 250301 |
| L0A 1A0 | BETHANY | 4 | PETERBOROUGH EXAM P 46; RF 3 | 250301 |
| KKK BLK | BLACKWATER | F | FROM LORNEVILLE POSTMASTER; ENTRY#39 | 250301 |
| KKK BLK | BLACKWATER | 4 | QUE CHRONICLE; P23 | 250301 |
| N0P 1A0 | BLENHEIM | 4 | RF 2; ENT#100 | 250301 |
| P0R 1B0 | BLIND RIVER | F | P 56 LOCAL PAPER? | 250301 |
| G0A 1H0 | BOISCHATEL | 7 | BRICK PLANT SUNK 3 IN ENTRY P 400 | 250301 |
| P0B 1C0 | BRACEBRIDGE | 3 | BRACEBRIDGE GAZETTE; P 5 RF 4 | 250301 |
| L6T 2T9 | BRAMPTON | 3 | RF 2; ENT #101 | 250301 |
| N3R 2H0 | BRANTFORD | 4 | ARTICLES SLID  CANADIAN PRESS ALSO BRANTFORD EXPORTER; RF 4 | 250301 |
| B0S 1C0 | BRIDGETOWN | 3 | MONCTON PAPER ?, P 5; RF 3 | 250301 |
| K0K 1H0 | BRIGHTON | 3 | PETERBOROUGH EXAM  P46, RF 3 | 250301 |
| K6V 3P5 | BROCKVILLE | 3 | MONTREAL DAILY STAR MAR 2 | 250301 |
| P0R 1C0 | BRUCE MINES | 4 | PICTURES SHAKEN OFF WALL; SAULT-STE-MARIE DAILY STAR; P4;RF5 | 250301 |
| J8L 2K4 | BUCKINGHAM | 4 | BUCKINGHAM POST, P 5;RF 4 | 250301 |
| G0L 1E0 | CABANO | 6 | HARD TO STAND; ENTRY 395 | 250301 |
| G0T 1J0 | CABOT MANOIR | 8 | MANY WINDOWS BROKEN P200 | 250301 |
| G0T 1J0 | CABOT MANOIR | 8 | STRUCTURAL DAMAGE; P320 | 250301 |
| KKK CAL | CALEDONIA SPRINGS | 5 | SPILLED WATER; ENTRY #102 RF 5 | 250301 |
| J0V 1B0 | CALUMET | 4 | RF 2;ENTRY#24 | 250301 |
| J0V 1B0 | CALUMET | 4 | WATER SLOSHED FROM TUB; ENTRY#31; RF 3 | 250301 |
| KKK CAM | CAMBORNE | 4 | QUEBEC DAILY TELEGRAPH; ALSO P 7; RF 5 (ONT) | 250301 |
| K0L 1L0 | CAMPBELLFORD | 4 | NP CLIPPING P46 | 250301 |
| E3N 3G1 | CAMPBELLTON | 4 | FALL OF POOR CHIMNEYS; NP CLIPPING | 250301 |
| E3N 3G1 | CAMPBELLTON | 4 | CANADIAN PRESS, P 7, RF 5 | 250301 |
| P0M 1H0 | CAPREOL | 4 | STRONG VIBRATION; RF 2;ENTRY#26 | 250301 |
| E0B 1K0 | CARAQUET | 4 | THREE REPLIES;ENTRY#3 RF 4 | 250301 |
| K7C 2V8 | CARLETON PLACE | 4 | MONTREAL DAILY STAR MAR 2 AND OTHERS | 250301 |
| L0A 1C0 | CAVAN | 4 | PETERBOROUGH EXM P 46; RF 3 | 250301 |
| B0P 1J0 | CENTREVILLE | 4 | HALIFAX HERALD | 250301 |
| J3L 4X1 | CHAMBLY | 4 | LA PRESSE P 70, RF 5 | 250301 |
| G0W 1G0 | CHAMBORD | 3 | ENTRY 297 | 250301 |
| G0X 1C0 | CHAMPLAIN | 6 | LA PRESSE, P69; RF 7 | 250301 |
| P0M 1K0 | CHAPLEAU | 3 | RF 2; ENT#103 | 250301 |
| G0X 1E0 | CHARETTE | 4 | WIDELY FELT; LA PRESSE, P69; RF 5 | 250301 |
| G1H 3E7 | CHARLESBOURG | 6 | MANY OBJECTS FELL; LA PATRIE P 80 | 250301 |
| C1A 7K2 | CHARLOTTETOWN | 4 | LOUD VIBRATIONS, CLOCKS STOPPED CHRLTTTWN GUARDIAN, P 7; RF3 | 250301 |
| G6W 5R6 | CHARNY | 4 | LA PRESSE ; P72 | 250301 |
| E1N 3A7 | CHATHAM | 3 | NP CLIPPING  maybe ontario?? check out | 250301 |
| N7M 5K8 | CHATHAM | 4 | CANADIAN PRESS ALSO CHATHAM DAILY NEWS; RF 5 | 250301 |
| K0C 1H0 | CHESTERVILLE | 3 | RF 3; ENT#104 | 250301 |
| G0V 1A0 | CHICOUTIMI | 4 | (STE-ANNE-DE-CHICOUTIMI RF 3;ENT#59 | 250301 |
| G0V 1A0 | CHICOUTIMI | 5 | OBJECTS THROWN FROM SHELVES ENTRY 192 AND 291 | 250301 |

| | | | |
|---|---|---|---|
| J0M 1E0 | CHISASIBI | 3 | LETTER; VOL 3 P 110 (FORT GEORGE) 250301 |
| GGG CHU | CHUTE-DES-PASSES | 3 | 80 MILES N MISTASSINI;RF 2; ENT#77 250301 |
| J1A 1N0 | COATICOOK | 4 | NP CLIPPING 250301 |
| J1A 1N0 | COATICOOK | 5 | COATICOOK OBSERVER, P 9; RF 5 250301 |
| P0J 1C0 | COBALT | F | THE NUGGET; P 35 250301 |
| K0J 1K0 | COBDEN | 4 | WINDOWS RATTLED; RF 2; ENT#105 250301 |
| K9A 2M2 | COBOURG | 4 | NP CLIPPING (COBURG PAPER?) P 9; RF 4 250301 |
| P0L 1C0 | COCHRANE | 4 | FELT STRONGLY; CANADIAN PRESS; P 9; RF 3 250301 |
| K0L 1P0 | COE HILL | 4 | DISHES RATTLED; RF 3; ENT#106 250301 |
| L9Y 3X5 | COLLINGWOOD | 3 | COLLINGWOOD BULLETIN; P 9; RF 3 250301 |
| KKK COR | CORDOVA MINES | 4 | RF 4; ENT#107 250301 |
| K6H 5T9 | CORNWALL | 5 | CORNWALL STANDARD: CLOCKS STOPPED, VASES TOPPLED; P 9; RF 5 250301 |
| K6H 5T9 | CORNWALL | 4 | NP CLIPPING 250301 |
| G0M 1C0 | COURCELLES | 4 | LA PRESSE P71; RF 5 250301 |
| E0K 1B0 | DALHOUSIE | 4 | FEW WINDOWS BROKEN; CAMPBELLTON NEWSPAPER, P 7 250301 |
| G0Z 1C0 | DAVELUYVILLE | 4 | LA PRESSE P72 250301 |
| G0W 1N0 | DESBIENS | 5 | OBJECTS THROWN TO FLOOR; ENTRY 187 250301 |
| G0S 1G0 | DESCHAILLONS | 6 | OBJECTS FELL, BROKE, DESCHAILLONS PAPER; LA PRESSE P 72 250301 |
| B0V 1A0 | DIGBY | 3 | MONCTON PAPER;, P 5 250301 |
| G0N 1E0 | DISRAELI | 4 | L'ECLAIREUR; P 73 250301 |
| M3C 2E0 | DON MILLS | 3 | LETTER; PVOL 3; P 110 250301 |
| E0A 1M0 | DORCHESTER | 3 | RF 2; ENTRY#4 250301 |
| J2B 1G8 | DRUMMONDVILLE | 4 | SOUND LIKE TRAIN; RF 2; ENTRY 28 250301 |
| L9H 2P8 | DUNDAS | 5 | OBJECTS FELL DUNDAS STAR; P 10; RF 5 250301 |
| N0G 1R0 | DURHAM | 5 | CLOCKS STOPPED;RF 2; ENT #108 250301 |
| G0N 1G0 | EAST BROUGHTON | 6 | WINDOWS BROKE; LA PRESSE P71; RF 6 250301 |
| E3V 1T7 | EDMUNDSTON | 6 | PLASTER CRACKED NEAR CHIMNEY ENTRY 394; ALSO P11 RF 5 250301 |
| K0J 1T0 | EGANVILLE | 4 | OTTAWA JOURNAL, P 11; RF 4 250301 |
| K0G 1E0 | ELGIN | 4 | RF 2; ENT#109; ALSO REPORTED NOT FELT 250301 |
| K0A 1W0 | EMBRUN | 5 | BROKEN WINDOWS?? LA PRESSE, P 69; RF 6 250301 |
| KKK EMI | EMILY | 4 | PETERBOROUGH EXAM P 46 ; RF 3 250301 |
| P0P 1C0 | ESPANOLA | 4 | NP CLIPPING NO PUBLISHER; P 11; RF 5 250301 |
| J2N 2H3 | FARNHAM | 5 | WATERLOO JOURNAL; P12; RF 5 250301 |
| J0X 1T0 | FARRELLTON | 4 | RF 3; ENT#110 250301 |
| K0M 1N0 | FENELON FALLS | 3 | RF 2; ENT#111 250301 |
| K0M 1N0 | FENELON FALLS | 0 | ENT#111 250301 |
| N1M 2W7 | FERGUS | 2 | RF 2; ENT#112 250301 |
| J0W 1C0 | FERME-NEUVE | 4 | LA PRESSE P 72 250301 |
| N0C 1E0 | FLESHERTON | 4 | RF 3; ENT #113 250301 |
| PPP FLI | FLINT | 0 | RF 1; ENT#114 250301 |
| K0J 1V0 | FORESTERS FALLS | 4 | RF 3; ENT#115 250301 |
| P0L 1H0 | FORT ALBANY | 2 | LETTER, V 3 P 110 250301 |
| P9A 3M5 | FORT FRANCES | 0 | RF 1; ENT #116 250301 |
| E3B 4X7 | FREDERICTON | 3 | HALIFAX HERALD, P12; QUESTIONNAIRE V 3 P 108 RF 6?? 250301 |
| G0C 1R0 | GASPE | 4 | NOISE; CRACKED WOODWK? ENTRY#29;PERSON 2 250301 |
| G0C 1R0 | GASPE | 3 | PERSON 1; RF 4; ENTRY 29 250301 |
| C0A 1L0 | GEORGETOWN | 4 | RF 3; WINDOWS RATTLED; ENTRY#21 250301 |
| LLL GEO | GEORGETOWN | 3 | MAYBE 4; GEORGETOWN HERALD; MAYBE NOT ONTARIO 250301 |

| | | | | | |
|---|---|---|---|---|---|
| N7A 2K5 | GODERICH | 4 | DOORS OPENED; GODERICH STAR; P 13; RF 5 | 250301 |
| P0M 1W0 | GOGAMA | 3 | RF 2; ENT#117 | 250301 |
| J0X 1W0 | GRACEFIELD | 5 | OBJECTS THROWN TO FLOOR;RF 5; ENT#30 | 250301 |
| E0J 1M0 | GRAND FALLS | 5 | ST JOHN JOURNAL V 3 P 110 | 250301 |
| G9T 5L1 | GRAND-MERE | 6 | DAMAGE TO CHURCH; ENTRY 389; ALSO KINGSTON STANDARD P14 | 250301 |
| G9T 5L1 | GRAND-MERE | 6 | WINDOWS BROKE; LA PRESSE P68 AND MANY OTHERS | 250301 |
| GGG GRA | GRANDE-BAIE | 5 | ENTRY 290 | 250301 |
| P0C 1G0 | GRAVENHURST | 4 | GRAVENHURST BANNER ; P 13; RF 4 | 250301 |
| J0V 1J0 | GRENVILLE | 5 | WATER SLOPPED FROM TUB; RF 3; ENTRY#31 | 250301 |
| B0H 1N0 | GUYSBOROUGH | 4 | WINDOWS RATTLED; RF 4;ENT#10 | 250301 |
| B0H 1N0 | GUYSBOROUGH | 3 | RF 4;ENTRY#10 PERSON 1 | 250301 |
| P0J 1K0 | HAILEYBURY | 3 | FELT STRONGLY; CANADIAN PRESS | 250301 |
| K0M 1S0 | HALIBURTON | 4 | RF 3; ENT #112 | 250301 |
| B3J 3A4 | HALIFAX | 3 | NP MONTREAL DAILY STAR MAR ; RF 4 | 250301 |
| BBB HAL | HALLS HARBOUR | 4 | HALIFAX HERALD; P 19 | 250301 |
| L8N 3T4 | HAMILTON | 4 | NP CAN PRESS; RF 3; P 15 | 250301 |
| LLL HAM | HAMILTON BEACH | 4 | NEWSPAPER CLIPPING; P 16; | 250301 |
| N0G 1Z0 | HARRISTON | 4 | NP CLIPPING;LOCAL PAPER; P 16; RF 4 | 250301 |
| E0J 1N0 | HARTLAND | 5 | FEW WINDOWS BROKE; ROAR; CARLETON OBSERVER ET AL P 16; RF 4 | 250301 |
| K0L 1Y0 | HASTINGS | 3 | PETERBOROUGH EXAM, P 46 | 250301 |
| K0L 1Z0 | HAVELOCK | 3 | HAVELOCK STANDARD MAR 5, P 17; RF 2 | 250301 |
| K6A 1H1 | HAWKESBURY | 4 | RF 3; ENT #120 | 250301 |
| K6A 1H1 | HAWKESBURY | 4 | RF 2; ENT 119 | 250301 |
| P0L 1N0 | HEARST | 3 | RF 3; ENT # 121; ALSO CANADIAN PRESS | 250301 |
| G0W 1S0 | HEBERTVILLE | 6 | PICTURES FELL; ENTRY 195 ; BUILDING DESTROYED? V3 GLOBE P107 | 250301 |
| G0X 1K0 | HERVEY-JONCTION | 4 | ROARING NOISE;RF 2; ENTRY#32 | 250301 |
| G0X 1K0 | HERVEY-JONCTION | 3 | ENTRY #32; 2 PERSONS, RF 2 | 250301 |
| J8X 3Y9 | HULL | 3 | OTTAWA JOURNAL MAR 2; P 17 | 250301 |
| P0A 1K0 | HUNTSVILLE | 4 | FELT WIDELY; HUNTSVILLE FORESTER P 17, RF 5 | 250301 |
| KKK IDA | IDA | 3 | PETERBOROUGH EXAM P 46 | 250301 |
| J0J 1G0 | ILE-AUX-NOIX | 4 | LA PRESSE P71 | 250301 |
| PPP IND | INDIAN CHUTE FALLS | 3 | THE NUGGE; P 35 | 250301 |
| P0R 1H0 | IRON BRIDGE | 3 | DAILY STAR; P 18;RF 2 (IRON RIVER) | 250301 |
| K0E 1K0 | IROQUOIS | 4 | TORONTO DAILY MAIL AND EMPIRE ; P 18; RF 4 | 250301 |
| PPP ISL | ISLAND FALLS | 4 | NP CANADIAN PRESS (HISTORIC ISLAND FALLS) | 250301 |
| J6E 6J3 | JOLIETTE | 6 | WINDOWS BROKE;LA PATRIE P 78; L'ETOILE DU NORD, P 18;RF 6 | 250301 |
| G7X 7W7 | JONQUIERE | 5 | FRIGHTENEND MANY; LA PATRIE; P 76 | 250301 |
| G0L 1M0 | KAMOURASKA | 8 | CHIMNEYS FELL | 250301 |
| G0L 1M0 | KAMOURASKA | 6 | TOMBSTONE TURNED SLIGHTLY; ENTRY 280 | 250301 |
| G0L 1M0 | KAMOURASKA | 8 | SPRING OPENED UP; ENTRY 282 | 250301 |
| J0X 1X0 | KAZABAZUA | 4 | STRONG SHAKE AND NOISE; RF 3; ENT#33 | 250301 |
| K0L 2G0 | KEENE | F | PETERBOROUGH EXAM P 46 | 250301 |
| B4N 3W4 | KENTVILLE | 5 | OBJECTS FELL; HALIFAX HERALD, P19; RF 4 | 250301 |
| N0G 2G0 | KINCARDINE | 3 | LOCAL PAPER; P 19; RF 4 | 250301 |
| K7L 2Z3 | KINGSTON | 3 | GENERALLY MINOR; MONTREAL DAILY STAR MAR 2; ALSO P 20; RF 4 | 250301 |
| K0M 2A0 | KINMOUNT | 3 | RF 2; ENT #122 | 250301 |
| N2G 4G7 | KITCHENER | 4 | KITCHENER DAILY RECORD; P 20; RF 4 | 250301 |
| J0E 1V0 | KNOWLTON | 6 | OBJECTS FELL; MDS MAR 2 | 250301 |

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| PPP KOR | KORAH | 3 | LONG PERIOD EFFECTS SAULT-STE MARIE STAR; P56 | 250301 |
| J0C 1B0 | L'AVENIR | 5 | WATERLOO JOURNAL, P23;RF V4 | 250301 |
| G0R 2B0 | L'ISLET | 4 | WINDOWS RATTLED; RF 3;ENTRY#37 ALSO LA PATRIE | 250301 |
| G0T 1J0 | LA MALBAIE | 7 | CHURCH CROSS ROTATED; P314 | 250301 |
| G0T 1J0 | LA MALBAIE | 7 | CHIMNEY DAMAGE, NP P 148 VOL 1 | 250301 |
| G0T 1J0 | LA MALBAIE | 6 | STOVES UPSET; P255 ;317 | 250301 |
| G0R 1Z0 | LA POCATIERE | 7 | CRACKED GROUND; ENTRY 263-65 | 250301 |
| G0R 1Z0 | LA POCATIERE | 8 | CHANGES IN WELLS; CRACKS IN SNOW; ENTRY P263-5 | 250301 |
| G0R 1Z0 | LA POCATIERE | 8 | CHIMNEYS TWISTED OFF;ENTRY 252 | 250301 |
| G9X 3P4 | LA TUQUE | 6 | LOCAL NEWSPAPER P23 ;RF 6 | 250301 |
| GGG PER | LAC PERIBONKA | 4 | FROM CAMP IN WOODS; RF 2;ENTRY 77 | 250301 |
| G6B 1H6 | LAC-MEGANTIC | 5 | WATERLOO JOURNA, P24 | 250301 |
| H8S 2N4 | LACHINE | 4 | EVERYTHING RATTLED;RF 3; ENT#38 | 250301 |
| J8H 1Y2 | LACHUTE | 4 | THE WATCHMAN, P23; RF 4 | 250301 |
| J0V 1K0 | LAKEFIELD | 0 | ENTRY#34 AND 35 | 250301 |
| K0C 1N0 | LANCASTER | F | LA PRESSE, P 69; RF 6??? | 250301 |
| N8H 2Z3 | LEAMINGTON | 3 | HAM SPEC; P58 | 250301 |
| E0G 2H0 | LEPREAU | 0 | ST JOHN JOURNAL; V3 P 110 | 250301 |
| G0A 2M0 | LES EBOULEMENTS | 8 | 13 CHIMNEYS BROKE; SOME FELL; RF 6;ENT36, LA PRESSE P69 | 250301 |
| G0A 2M0 | LES EBOULEMENTS | 7 | SOUNDED LIKE THUNDER; NO DAMAGE;ENTRY 36 | 250301 |
| G6V 5T4 | LEVIS-LAUZON | 6 | SOME WINDOWS BROKE; LA PRESSE P71; LA PATRIE P 78; RF 6 | 250301 |
| GGG LIM | LIMOILOU | 8 | STRUCTURAL DAMAGE AT GRAIN ELEVATOR ENTRY 259;LA PATRIE P80 | 250301 |
| K9V 2Y6 | LINDSAY | 4 | PEOPLE RN INTO STREETS; NP CAN PRESS; ALSO P 23; RF 3 | 250301 |
| N0H 1W0 | LION'S HEAD | 4 | LONDON FREE PRESS; P 23; RF 3 | 250301 |
| N0G 3A0 | LISTOWEL | 3 | LISTOWEL BANNER; P 23; RF 2 | 250301 |
| P0P 1K0 | LITTLE CURRENT | 3 | RF 2; ENT # 123 | 250301 |
| B0T 1K0 | LIVERPOOL | 0 | ENTRY#11; RF 1 | 250301 |
| AAA LOM | LOMOND | F | FROM ALAN RUFFMAN | 250301 |
| N6A 1B0 | LONDON | 4 | LONDON FREE PRESS | 250301 |
| G2B 1E7 | LORETTEVILLE | 6 | LA PATRIE; P78 | 250301 |
| LLL LOR | LORNEVILLE | 0 | NEAR BLACKWATER, ONT ;ENT#39; RF 1 | 250301 |
| G0S 1S0 | LOTBINIERE | 4 | RF 3; ENTRY#65 | 250301 |
| B0A 1M0 | LOUISBOURG | 0 | ENTRY#12 RF 1 | 250301 |
| GGG LOU | LOUISEVILLE | 5 | FRIGHTENED PEOPLE; LA PRESSE, P68; RF 6 | 250301 |
| B0J 2C0 | LUNENBURG | 4 | HALIFAX HERALD; P23; RF 3 | 250301 |
| GGG MAD | MADDINGTON-FALLS | 4 | CLIPPING LA PRESSE P72 | 250301 |
| J1X 1Y4 | MAGOG | 5 | DAMAGE; THE ENTERPRISE, P 24; RF 5 | 250301 |
| B0N 1T0 | MAITLAND | 4 | ENTRY#13; RF 4; RATS CAME FROM CELLAR | 250301 |
| J0L 1J0 | MARIEVILLE | 7 | LA PRESSE P 70, RF 6 | 250301 |
| P0P 1P0 | MASSEY | 3 | DAILY STAR | 250301 |
| G4W 3A2 | MATANE | 4 | STRONG SHAKE, NOISE THUNDER;RF 2;EN#40 | 250301 |
| G0L 1N0 | MATHESON | 3 | FELT DISTINCTLY; CANADIAN PRESS; ALSO P 16; RF 2 | 250301 |
| P0H 1V0 | MATTAWA | 3 | RF 2; ENT#124 | 250301 |
| EEE MCG | MCGIVNEY JUNCTION | 4 | RF 3; ENT#125 | 250301 |
| N0H 1Y0 | MEAFORD | 3 | RF 2; ENT # 126 TORONTO MAIL AND EMPIRE | 250301 |
| G0W 2A0 | METABETCHOUAN | 5 | OBJECTS FELL; ENTRY 294; ALSO LA PRESSE, P 64 | 250301 |
| L4R 1R2 | MIDLAND | 4 | COLLINGWOOD BULLETIN, MIDLAND FREE PRESS; P 25; RF 5 | 250301 |
| L0A 1G0 | MILLBROOK | 4 | PETERBOROUGH EXAM; P 46 | 250301 |

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| EEE MIL | MILLTOWN | 3 | ST CROIX COURIER P 59 | 250301 |
| L9T 4B6 | MILTON | 4 | HAMILTON SPECTATOR; P 24 ; RF 5 | 250301 |
| K0M 2K0 | MINDEN | 4 | MINDEN ECHO, P 25 RF 5 | 250301 |
| GGG MIS | MISERE | 3 | ENTRY #42; RF 3 | 250301 |
| E1C 1E8 | MONCTON | 4 | MONCTON DAILY TIMES ET AL, P 24; RF 5 | 250301 |
| E1C 1E8 | MONCTON | 4 | NP CLIPPING | 250301 |
| G0E 1T0 | MONT-LOUIS | 5 | DISPLACED STOVEPIPES; LA PRESSE P 71, RF 6 (ST-MAXIME) | 250301 |
| J0T 1Z0 | MONT-TREMBLANT | 5 | ICE CRACKED; LA PRESSE, P30 | 250301 |
| JJJ MON | MONTCALM | 4 | FRIGHTENED PEOPLE; L'ETOILE DU NORD, P 18; | 250301 |
| J0V 1L0 | MONTEBELLO | 3 | TWO REPLIES;RF 2; ENT#43 | 250301 |
| G5V 1K6 | MONTMAGNY | 5 | LE PEUPLE, P 24; RF 6 | 250301 |
| H2Y 1C6 | MONTREAL | 5 | CLOCKS STOP; FEW PEOPLE RAN INTO STREETS; RF 7 MON JOUR | 250301 |
| P0L 1W0 | MOOSE FACTORY | 3 | MAYBE 4;LETTER;V 3 P110 | 250301 |
| G0G 2E0 | NATASHQUAN | 3 | ENTRY 355 | 250301 |
| B2H 5E1 | NEW GLASGOW | 3 | ENTRY #14;RF 1 | 250301 |
| B2H 5E1 | NEW GLASGOW | 4 | HALIFAX HERALD, P 34 ; RF 4 | 250301 |
| B0C 1P0 | NEW HAVEN | 4 | RF 2;ENTRY#20; PERSON 1 | 250301 |
| B0C 1P0 | NEW HAVEN | 3 | RF 2;:ENTRY#20; PERSON 2 | 250301 |
| P0J 1P0 | NEW LISKEARD | 4 | THE NUGGET; P 35 | 250301 |
| K0G 1P0 | NEWBORO | 3 | RF 2; ENT # 127; ALSO REPORTED NOT FELT | 250301 |
| E1V 3M4 | NEWCASTLE | 4 | CANADIAN PRESS | 250301 |
| L3Y 4X7 | NEWMARKET | 4 | NEWMARKET ERA ; P 34 ; RF 4 | 250301 |
| L2E 6X5 | NIAGARA FALLS | 4 | NIAGARA FALLS REVIEW; P 34; RF 5 | 250301 |
| PPP NIC | NICHOLSON SIDING | 0 | RF 1; ENT # 128 | 250301 |
| J0G 1E0 | NICOLET | 3 | ENTRY#44; RF 2 | 250301 |
| J0G 1E0 | NICOLET | 5 | THINGS FELL BROKE; LA PRESSE P 70 | 250301 |
| P0T 2J0 | NIPIGON | 0 | ORIG 1; ENT # 129 | 250301 |
| LLL NOR | NORFOLK | 3 | NP CLIPPING; LOCAL PAPER; P 34; RF 5 | 250301 |
| P1B 1H0 | NORTH BAY | 5 | SOME DISHES SMASHED; CANADIAN PRESS; V 3 P110 | 250301 |
| K0L 2V0 | NORWOOD | 4 | PETERBOROUGH EXAM P 46 | 250301 |
| G0A 2S0 | NOTRE-DAME-DES-LAURENTIDES | 5 | LARGE OBJECT FELL; LA PATRIE P80 | 250301 |
| G0L 1X0 | NOTRE-DAME-DU-LAC | 6 | SOME WINDOWS BROKE; LA PRESSE P71; RF 6 | 250301 |
| K0L 2W0 | OMEMEE | 4 | PETERBOROUGH EXAM P 46 | 250301 |
| L3V 5B9 | ORILLIA | 4 | COLLINGWOOD BULLETIN; P 9 | 250301 |
| L1H 3Z7 | OSHAWA | 4 | OSHAWA TELEGRAM; P43 | 250301 |
| K1N 5A1 | OTTAWA | 5 | OTTAWA CITIZEN MAR 2 | 250301 |
| N4K 2H4 | OWEN SOUND | 4 | COLLINGWOOD BULLETIN ;P 9 | 250301 |
| K0A 2X0 | PAKENHAM | 4 | RF 2; ENT # 130 | 250301 |
| N0G 2P0 | PALMERSTON | 3 | RF 3; ENT # 131 | 250301 |
| N3L 2M2 | PARIS | 3 | PERSONAL NOTE; HENS PANICKED; V 3 P108 | 250301 |
| B0M 1S0 | PARRSBORO | 4 | CLOCKS STOPPED;HALIFAX HERALD, P45 | 250301 |
| K8A 6X3 | PEMBROKE | 5 | DISHES BROKEN; MONTREAL DAILY STAR MAR 2 | 250301 |
| G0W 2G0 | PERIBONCA | 4 | POSSIBLE 3;RF 2;ENTRY#54 | 250301 |
| K7H 1H9 | PERTH | 3 | PERTH COURIER; P 45 | 250301 |
| E0J 1V0 | PERTH-ANDOVER | 4 | RF 2; ENTRY#2 | 250301 |
| K9J 3R9 | PETERBOROUGH | 4 | PETERBOROUGH EXAMINER; P 46 RF 4 | 250301 |
| B0K 1H0 | PICTOU | 3 | PICTOU ADVOCATE; P45; RF 4 | 250301 |
| J0G 1J0 | PIERREVILLE | 5 | CLOCK STOPPED; RF 3; ENTRY 131; ERROREAH | 250301 |

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| G0T 1M0 | POINTE-AU-PIC | 7 | MOVED HEAVY FURNITURE ENTRY 220 AND 236 | 250301 |
| G0T 1M0 | POINTE-AU-PIC | 8 | CHIMNEY DAMAGE ENTRY 221; ALSO CANADIAN PRESS | 250301 |
| H9R 3J3 | POINTE-CLAIRE | 5 | OBJECTS OVERTURNED; LA PATRIE P78 | 250301 |
| MMM POR | PORT CREDIT | 0 | RF 1; ENT #133 | 250301 |
| N0A 1N0 | PORT DOVER | 4 | TABLE "DANCED";WINDOWS R'TLD RF 3; ENTRY 134 | 250301 |
| N0A 1N0 | PORT DOVER | 3 | RF 3; ENT#134 | 250301 |
| N0E 1M0 | PORT ROWAN | 2 | RF 2; ENT #135 | 250301 |
| L0K 1S0 | PORT SEVERN | 0 | RF 1; ENT#136 | 250301 |
| N0L 2A0 | PORT STANLEY | 3 | HAMILTON SPECTATOR; P 68 | 250301 |
| GGG POR | PORT-ALFRED | 5 | WINDOWS BROKEN ENTRY 189 (CHUTE ADAM) | 250301 |
| GGG POR | PORT-ALFRED | 6 | DAMAGE AT MILL ENTRY 298 | 250301 |
| GGG POR | PORT-ALFRED | 5 | LAMP KNOCKED OVER; ENTRY 367 | 250301 |
| G0G 2K0 | PORT-CARTIER-OUEST | 4 | FELT AT SEA AS JOLT ENT 340; THE GLOBE V3 P107 (SHELTER BAY? | 250301 |
| G0A 2Y0 | PORTNEUF | 7 | LANDSLIDES ? ENTRY 352 | 250301 |
| G0A 2Y0 | PORTNEUF | 4 | TWO REPLIES | 250301 |
| G1R 4S9 | QUEBEC | 7 | WOMAN DIED OF FRIGHT; ENTRY 179 | 250301 |
| G1R 4S9 | QUEBEC | 8 | STRUCTURAL DAMAGE ENTRIES 185;245;249 also many newspaper r | 250301 |
| J0E 1Y0 | RACINE | 7 | LA PRESSE P72; RF 6 | 250301 |
| E0A 2M0 | RICHIBUCTO | 4 | TWO REPLIES; ENTRY#6; RF 4 | 250301 |
| J0B 2H0 | RICHMOND | 4 | WATERLOO JOURNAL, P 55; RF 5 | 250301 |
| J0P 1P0 | RIGAUD | 4 | LA PRESSE, P69, RF 5 | 250301 |
| GGG PIK | RIVIERE PIKAUBA | 7 | UNABLE TO STAND; ENTRY 398 AND 194 | 250301 |
| G0A 3A0 | RIVIERE-A-PIERRE | 5 | OBJECTS THROWN TO FLOOR; ENTRY P397 | 250301 |
| G5R 3Y7 | RIVIERE-DU-LOUP | 8 | WELL CHANGES; ENTRY 288 | 250301 |
| G5R 3Y7 | RIVIERE-DU-LOUP | 8 | STRUCTURAL DAMAGE ENTRIES 225;215 | 250301 |
| G5R 3Y7 | RIVIERE-DU-LOUP | 6 | BROKE WINDOWS; ENTRY 228 | 250301 |
| G0L 2C0 | RIVIERE-OUELLE | 8 | TOMBSTONES TURNED; ENTRY 270 CHIMNEY FALL;ENTRY 266 | 250301 |
| G0L 2C0 | RIVIERE-OUELLE | 7 | STRUCTURAL DAMAGE ENTRY 266-72 | 250301 |
| G0L 2C0 | RIVIERE-OUELLE | 8 | CHURCH BADLY DAMAGED; ENTRY 269-72 | 250301 |
| G8H 2L6 | ROBERVAL | 4 | TWO REPLIES;ENTR#45; RF 4 ; LE COLON; P 55 | 250301 |
| E0K 1E0 | ROBINSONVILLE | 4 | THREE REPLIES;ORIGINAL INT#;ENTRY#5 (PORT ROBINSON?) | 250301 |
| J0B 2K0 | ROCK-ISLAND | 5 | NP CLIP P55; RF 7 | 250301 |
| K0K 2X0 | ROSENEATH | 4 | PERTERBOROUGH EXAM P 46 | 250301 |
| J0H 1E0 | ROXTON-FALLS | 5 | MOVED FURNITURE; LA PRESSE P69; RF 5 | 250301 |
| J0M 1R0 | RUPERT HOUSE | 3 | V 3 LETTER; P112 | 250301 |
| E0A 3C0 | SACKVILLE | 4 | SACKVILLE TRIBUNE P 56; RF 4 | 250301 |
| J6T 1L8 | SALABERRY-DE-VALLEYFIELD | 5 | FRIGHTENED RAN OUTSIDE RFR 3;ENT#91 | 250301 |
| B0W 2Y0 | SALMON RIVER | 3 | RF 4; ENTRY#10 | 250301 |
| N7T 7N2 | SARNIA | 3 | OTT JOURNAL P56 ALSO CAN PRESS; RF 4 | 250301 |
| P6A 5N1 | SAULT STE MARIE | 4 | SAULT STE MARIE DAILY STAR P56 ; RF 5 | 250301 |
| G0J 3K0 | SAYABEC | 4 | TWO REPLIES;RF3; ENT#137 | 250301 |
| J0B 3B0 | SCOTSTOWN | 7 | ICE ON RIVER CRACKED; LA PRESSE, p69; RF 6 | 250301 |
| J0Y 2M0 | SENNETERRE | 3 | TWO REPLIES;RF 2;ENTRY#27 (CN ARCHIVES SAYS NEAR SENNETERRE) | 250301 |
| GGG SEP | SEPT-CHUTES | 5 | ENTRY 330 (SEVEN FALLS?) | 250301 |
| K0H 2P0 | SHARBOT LAKE | 4 | RF 3;ENT #138 | 250301 |
| G9N 6V3 | SHAWINIGAN | 7 | LANDSLIDE BEFORE?? ENTRY P325, 326 ALSO TOR STAR | 250301 |
| G9N 6V3 | SHAWINIGAN | 7 | STRUCTURAL DAMAGE; P326 NP MDS MAR 2 ;RF 8 | 250301 |
| L0N 1S0 | SHELBURNE | 4 | NP CLIPPING P57 MAYBE N.S.? | 250301 |

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| B0T 1W0 | SHELBURNE | 3 | RF 4; ENTRY#15 | | 250301 |
| B0T 1W0 | SHELBURNE | 4 | NOISE LIKE CAR STARTING; ENTRY#15; RF 4P | | 250301 |
| J1H 5C1 | SHERBROOKE | 5 | SHERBROOKE TRIBUNE; ALSO CANADIAN PRESS , P57; RF 6 | | 250301 |
| B0N 2H0 | SHUBENACADIE | 4 | HALIFAX HERALD ; P57; RF 5 | | 250301 |
| N3Y 4N5 | SIMCOE | 4 | HAM SPEC ; P58; RF 4 | | 250301 |
| KKK SMI | SMITH | 3 | PETERBOROUGH EXAM; P 46 | | 250301 |
| K7A 4T6 | SMITHS FALLS | 3 | RECORD NEWS; P58; RF 4 | | 250301 |
| J3P 7K1 | SOREL | 5 | QUESTIONNAIRE; V 3 P 108; ALSO LA PRESSE AND OTHERS RF 6 | | 250301 |
| PPP SOW | SOWERBY | 5 | FELT BY ALL; CLOCKS STOP; RF 4 ENT#139 | | 250301 |
| B0M 1X0 | SPRINGHILL | 5 | CLOCK STOPPED; ENTRY#16; RF 4; TWO REPLIES | | 250301 |
| L2R 7C2 | ST CATHARINES | 4 | QUESTIONNAIRE;V 3 P108 (RF 3) ALSO P 59 STANDARD? | | 250301 |
| B0N 2E0 | ST CROIX | 3 | ST CROIX COURIER P 59 (CALAIS) | | 250301 |
| B0E 3B0 | ST PETER'S | 4 | ON COAST; ENTRY#17; RF 3; PERSON 2 | | 250301 |
| B0E 3B0 | ST PETER'S | 3 | ENTRY#17; RF 3; PERSON 1 | | 250301 |
| N5P 3V7 | ST THOMAS | 4 | LONDON FREE PRESS; P 60 | | 250301 |
| G0R 2M0 | ST-ADALBERT | 3 | RF 2; ENT#46 | | 250301 |
| G0X 2G0 | ST-ADELPHE-DE-CHAMPLAIN | 5 | THINGS FELL AND BROKE LA PRESSE P 69; RF 7 | | 250301 |
| J0A 1C0 | ST-ADRIEN | 4 | NOISE; RF 3; ENT 48 | | 250301 |
| G0A 3B0 | ST-ALBAN | 6 | CHIMNEY FELL; RF 5;ENTRY#51 ALSO LA PRESSE P 70 | | 250301 |
| G0A 3B0 | ST-ALBAN | 5 | OPENED DOOR; RF 5;ENTRY#51 | | 250301 |
| J0A 1M0 | ST-ALBERT-DE-WARWICK | 3 | RF 3 ENTRY#52 | | 250301 |
| GGG SAL | ST-ALEXIS | 5 | ENTRY 290 | | 250301 |
| J0K 1W0 | ST-ALPHONSE | 4 | THREE REPLIES;RF 4;ENTRY#53 | | 250301 |
| GGG SAC | ST-ANTOINE-DE-CHARLEVOIX | 6 | RF 7;ENTRY#57 (STATUE BROKE??) | | 250301 |
| GGG SAC | ST-ANTOINE-DE-CHARLEVOIX | 4 | NOISE LIKE THUNDER; ENTRY#57 | | 250301 |
| GGG SAC | ST-ANTOINE-DE-CHARLEVOIX | 5 | CLOCKS STOPPED, ENT#58; RF 6 | | 250301 |
| G0R 2R0 | ST-AUBERT | 3 | RF 2; ENT#60 | | 250301 |
| J0H 1G0 | ST-BARNABE-SUD | 5 | WINDOWS BROKE; LA PRESSE; P 68 | | 250301 |
| J0L 1S0 | ST-BASILE-LE-GRAND | 6 | LA PRESSE; OBJECTS FELL AND BROKE, P 69; RF 7 | | 250301 |
| G0M 1N0 | ST-BENJAMIN | 4 | L'ECLAIREUR P 73 | | 250301 |
| G0L 2M0 | ST-BRUNO-DE-KAMOURASKA | 6 | CHIMNEY TURNED; ENTRY 278 | | 250301 |
| G0W 2L0 | ST-BRUNO-LAC-ST-JEAN | 3 | RF 2 ; ENTRY#61 | | 250301 |
| G0R 2S0 | ST-CAMILLE-DE-BELLECHASSE | 4 | NOISE LIKE CHIMNEY FIRE; RF 2;ENTRY#62; L'ECLAIREUR P 73 | | 250301 |
| G0A 3L0 | ST-CASIMIR | 4 | RF 3;ENTRY#63; ALSO LA PRESSE P 72 | | 250301 |
| J0S 1R0 | ST-CHRYSOSTOME | F | LA PRESSE P 70 | | 250301 |
| J0K 2A0 | ST-CLEOPHAS-DE-BRANDON | 4 | WIDELY FELT; LA PRESSE P 70, RF 6 | | 250301 |
| J0K 2B0 | ST-COME | 4 | FRIGHTENEND MANY; L'ECLAIREUR P 72 | | 250301 |
| G0R 2W0 | ST-CYRILLE-DE-L'ISLET | 5 | CRACKS IN PARTITIONS;ENT#66; RF 5 | | 250301 |
| J0C 1H0 | ST-CYRILLE-DE-WENDOVER | 5 | FRIGHTENED ALL; LA PRESSE P 70, RF 5 | | 250301 |
| G0L 2R0 | ST-DENIS-DE-LA-BOUTEILLERIE | 7 | BROKE CHIMNEYS; LA PRESSE P 70 | | 250301 |
| G0L 2R0 | ST-DENIS-DE-LA-BOUTEILLERIE | 7 | STATUES TOMBSTONES TURNED; ENTRY 212, 219 | | 250301 |
| G0K 1L0 | ST-DONAT-DE-RIMOUSKI | 7 | CONSIDERABLE DAMAGE ;RF 6;ENT#67 ALSO LA PRESSE P 70 | | 250301 |
| G0X 2N0 | ST-ELIE | 6 | CHURCH BELLS RANG; LA PRESSE, P64 | | 250301 |
| G0S 2L0 | ST-ETIENNE-DE-LAUZON | 4 | STRONG SHAKING; LA PRESSE P71; RF 6 | | 250301 |
| J0C 1J0 | ST-EUGENE-DE-GRANTHAM | 5 | MINOR DAMAGE; LA PATRIE P 78 | | 250301 |
| G0M 1S0 | ST-EVARISTE-DE-FORSYTH | 5 | PEOPLE FRIGHTND; LA PRESSE P 64; L'ECLAIREUR P 73 CLOCKS STP | | 250301 |
| G0L 2Z0 | ST-FABIEN | 8 | HOUSES DAMAGED; WELLS DISTURBED;ENT#68 ; LA PRESSE P 72 | | 250301 |
| G0L 2Z0 | ST-FABIEN | 8 | CHIMNEYS FELL;FISSURE;ENT#68; RF 7 | | 250301 |

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| G0W 2N0 | ST-FELICIEN | 5 | PEOPLE FRIGHTENED ENTRY 299 FIRE NOT DUE TO EQ. | 250301 |
| G0T 1T0 | ST-FIDELE | 5 | DAMAGE TO WOOD HOUSE;RF 5; ENT 69 | 250301 |
| J0G 1M0 | ST-FRANCOIS-DU-LAC | 6 | BELLS RANG, PLASTER CRACKED;RF 5; ENT 70 | 250301 |
| G0N 1P0 | ST-FREDERIC | 5 | CLOCKS STOP; OBJECTS FELL ;RF 5;ENT#71; ALSO LA PRESSE | 250301 |
| J0K 2N0 | ST-GABRIEL-DE-BRANDON | 5 | CLOCKS STOP; OBJECTS FELL ;RF 5;ENT#72 ALSO L'ETOILE DU NORD | 250301 |
| G0W 2P0 | ST-GEDEON | 4 | FRIGHTENED ALL; LA PRESSE P69; RF 6 | 250301 |
| E0G 2Y0 | ST-GEORGE | 4 | TWO REPLIES;RF 5; ENTRY 7 | 250301 |
| G0C 2X0 | ST-GEORGES-DE-MALBAIE | 5 | RF 3; ENT #73; L'ECLAIREUR P 72 | 250301 |
| G0L 3G0 | ST-GERMAIN-DE-KAMOURASKA | 6 | LA PRESSE P 71 | 250301 |
| G0A 3T0 | ST-GILBERT | 5 | WINDOWS BROKE; LA PRESSE P 71; RF 6 | 250301 |
| G0A 3V0 | ST-HILARION | 5 | RF 6; ENT#74 ALSO NP CIT MAR 4 | 250301 |
| J2S 5B2 | ST-HYACINTHE | 6 | THINGS FELL AND BROKE; LA PRESSE, P 30; RF 8 | 250301 |
| G0T 1V0 | ST-IRENEE | 7 | CHIMNEY DAMAGE;LA PRESSE, P69; RF 7 | 250301 |
| J3B 6V0 | ST-JEAN | 5 | CLOCKS STOP;FRIGHT; CLIPPING P68 | 250301 |
| G0L 3M0 | ST-JEAN-DE-DIEU | 4 | ENTRY 289 | 250301 |
| G0X 2V0 | ST-JEAN-DES-PILES | 4 | RF 3;ENT#76 | 250301 |
| G0R 3G0 | ST-JEAN-PORT-JOLI | 5 | OBJCTS OVRTND; CLOCKS STOP;RF 4;ENT75 | 250301 |
| J7Z 5L1 | ST-JEROME | 4 | LA PRESSE, P69; RF 7 | 250301 |
| J0N 1M0 | ST-JOSEPH-DU-LAC | 5 | OBJECTS FELL; RF 4;ENTRY#34 ; L'ECLAIREUR P 73 | 250301 |
| J0T 2H0 | ST-JOVITE | 3 | RF 2; ENT#78 | 250301 |
| G0N 1R0 | ST-JULES-DE-BEAUCE | 4 | RF 2; ENT#79 | 250301 |
| J0K 2V0 | ST-JUSTIN | 6 | CHURCH BELLS RANG, DISHES BROKEN; THE ECHO; P 59; RF 5 | 250301 |
| J0K 2X0 | ST-LIGUORI | 4 | L'ETOILE DU NORD, P18 | 250301 |
| G0A 4B0 | ST-MARC-DES-CARRIERES | 4 | LA PRESSE, P 79; RF 5 | 250301 |
| G0R 3R0 | ST-MARCEL-DE-L'ISLET | 4 | THREE REPLIES; RF 3;ENT#80 | 250301 |
| G0L 3T0 | ST-MATHIEU | 4 | SOUND OF FIRE; RF 3; ENTRY#41 | 250301 |
| G0X 2X0 | ST-MAURICE | 5 | MAYBE HIGHER; PANIC IN THEATER LA PRESSE P69; RF 7 | 250301 |
| J0L 2J0 | ST-MICHEL-DE-NAPIERVILLE | 4 | LA PRESSE; P71 | 250301 |
| G0R 3W0 | ST-ONESIME | 8 | CHANGES IN WELLS; ENTRY 234 | 250301 |
| JJJ OUR | ST-OURS | 6 | WINDOWS BRK; LA PRESSE P 70 | 250301 |
| G0L 3X0 | ST-PACOME | 8 | FISSURES ENTRY 206;STOVE BROKE IN 2;ENTRIES 277;213 | 250301 |
| G0L 3Y0 | ST-PASCAL | 8 | WINDOWS BROKEN,CHIMNEY FELL;RF 5;ENT81 | 250301 |
| G0L 3Y0 | ST-PASCAL | 7 | CRACKS IN CHURCH ENTRY 215 ALSO CANDIAN PRESS | 250301 |
| G0R 4A0 | ST-PHILEMON | 4 | RF 2; ENT #82 | 250301 |
| G0L 4A0 | ST-PHILIPPE-DE-NERI | 7 | STRUCTURAL DAMAGE ENTRY 208 | 250301 |
| G0R 4B0 | ST-PIERRE-MONTMAGNY | 4 | LA PRESSE P72 (DELAGRAVE) | 250301 |
| J0T 2L0 | ST-REMI-D'AMHERST | 6 | LA PRESSE, P69; RF 7 | 250301 |
| J0K 3H0 | ST-ROCH-DE-L'ACHIGAN | 4 | L'ETOILE DU NORD, P18 | 250301 |
| G0R 4E0 | ST-ROCH-DES-AULNAIES | 4 | TWO REPLIES ; RF 3;ENT#83 | 250301 |
| G0T 1X0 | ST-SIMEON | 8 | CHIMNEYS FELL; TWO REPLIES; RF 4; ENT#84 ALSO LA PRESSE P 70 | 250301 |
| J0S 1W0 | ST-STANISLAS-DE-KOSTKA | 5 | LA PRESSE P 72 | 250301 |
| G0Z 1H0 | ST-SYLVERE | 4 | LA PRESSE P72 | 250301 |
| G0M 2A0 | ST-THEOPHILE | 4 | L'ECLAIREUR P 73 | 250301 |
| J0K 3L0 | ST-THOMAS-DE-JOLIETTE | 4 | L'ETOILE DU NORD; P18 | 250301 |
| G0X 3H0 | ST-TITE | 5 | LA PRESSE P69 | 250301 |
| G0A 4L0 | ST-UBALDE | 4 | RF 3; ENT#85 | 250301 |
| G0A 4K0 | ST-URBAIN-DE-CHARLEVOIX | 8 | STRUCTURAL DAMAGE ENTRY 242;STEEPLE FELL ENTRY 307 | 250301 |
| G0A 4K0 | ST-URBAIN-DE-CHARLEVOIX | 6 | HEAVY OBJECTS MOVED;ENTRY 303 | 250301 |

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| G0A 4K0 | ST-URBAIN-DE-CHARLEVOIX | 7 | WATER OOZED UPWARD; DISCOUNTED EAH; ENTRY 304 | 250301 |
| G0R 4J0 | ST-VALLIER | F | "ROCK ISLAND" APPEARED ENTRY 235 INTENSITY??? | 250301 |
| GGG STY | ST-YVON | 3 | RF 2; ENT#86 | 250301 |
| E2L 4L1 | ST. JOHN | 3 | CANADIAN PRESS; V 3 P 110 ST JOHN JOURNAL | 250301 |
| E3L 1G3 | ST.STEPHEN | 4 | ST CROIX COURIER; P59; RF 5 | 250301 |
| J0R 1L0 | STE-ADELE | 4 | NOISE LOCOMOTIVE; 3 REPS;ENT#47 RF 3; ALSO LA PRESSE | 250301 |
| J8C 1M9 | STE-AGATHE-DES-MONTS | 5 | MANY CRACKS IN PLASTER;ENT#49; RF 5 | 250301 |
| J8C 1M9 | STE-AGATHE-DES-MONTS | 4 | ENTRY#49; RF 5 | 250301 |
| G0T 1R0 | STE-AGNES-DE-CHARLEVOIX | 5 | FRIGHTENED EVERYONE | 250301 |
| G0T 1R0 | STE-AGNES-DE-CHARLEVOIX | 7 | CHIMNEYS FELL; RF 6;ENT#50 | 250301 |
| G0T 1R0 | STE-AGNES-DE-CHARLEVOIX | 4 | TWO REPLIES (QUESTIONNAIRES) | 250301 |
| JJJ STA | STE-ANASTASIE | 6 | CHIMNEY FELL;PLASTER CRACKED;RF 5; ENT56 | 250301 |
| JJJ STA | STE-ANASTASIE | 5 | OBJECTS FELL, BELLS RANG;RF 5;ENT#55 | 250301 |
| G0X 2H0 | STE-ANGELE-DE-LAVAL | 4 | FELT WIDELY; LA PRESSE P 71 | 250301 |
| G0A 3C0 | STE-ANNE-DE-BEAUPRE | 6 | PIANO ROTATED; ENTRY 233 | 250301 |
| G0A 3C0 | STE-ANNE-DE-BEAUPRE | 7 | CONDUIT BROKEN AT COLLEGE; ENTRY 231(WHICH STE-ANNE?) | 250301 |
| G0X 2J0 | STE-ANNE-DE-LA-PERADE | 6 | ISOLATED DAMAGE; LA PRESSE, P68, RF 7 | 250301 |
| J0N 1H0 | STE-ANNE-DES-PLAINES | 7 | CEILING FELL; LA PRESSE, P 69; RF 7 | 250301 |
| J0A 1H0 | STE-CLOTHIDE | 5 | LA PRESSE, P64 | 250301 |
| G0S 2H0 | STE-CROIX | 4 | THREE REPLIES;LOUD NOISE; RF 3;ENT#65 | 250301 |
| J0W 1W0 | STE-FAMILLE-D'AUMOND | 3 | STRONG NOISE; RF 2; ENTRY#25 | 250301 |
| G0X 2R0 | STE-GENEVIEVE-DE-BATISCAN | 6 | LA PRESSE P69 | 250301 |
| G0R 3K0 | STE-LOUISE | 8 | TWISTD MONUMENTS; ENTRY 217 | 250301 |
| G0R 3K0 | STE-LOUISE | 6 | STOVE MOVED; DAMAGE STRUCTURAL; ENTRY 232;216 | 250301 |
| G0R 3Z0 | STE-PERPETUE-DE-L'ISLET | 6 | CHIMNEY CRACKED ENTRY P234 | 250301 |
| J0N 1S0 | STE-SCHOLASTIQUE | 5 | OBJECTS FELL;L'ETOILE DU NORD; ALSO P 69; RF 5 | 250301 |
| J0W 1X0 | STE-VERONIQUE | 4 | FELT BY ALL; LA PRESSE P72 | 250301 |
| N5A 2L1 | STRATFORD | 3 | STRATFORD BEACON HERALD; P 60; RF 5 | 250301 |
| G0Y 1P0 | STRATFORD CENTRE | 7 | CHIMNEY DAMAGE; LA PRESSE P72 RF 6 | 250301 |
| P3E 4S5 | SUDBURY | 4 | DISHES RATTLED; NP MONT DAILY STAR MAR 2; ALSO P 58; RF 3 | 250301 |
| G0L 4J0 | SULLY | 4 | MAYBE HIGHER; LA PRESSE P72 | 250301 |
| P0K 1T0 | SWASTIKA | 0 | RF 1; ENT#140 | 250301 |
| G0T 2A0 | TADOUSSAC | 7 | CHIMNEYS FELL ; RF 5; ENT#88 ALSO OTT CIT MAR 5 V 1, P150 | 250301 |
| G0T 2A0 | TADOUSSAC | 5 | HOUSE SHOOK THROUGHOUT;ENT#88 | 250301 |
| K0K 3G0 | TAMWORTH | 0 | RF 1; ENT#141 | 250301 |
| J0Z 3N0 | TASCHEREAU | 4 | RF 4; ENT#89 | 250301 |
| J6W 1B5 | TERREBONNE | 4 | RF 2; ENT#90 | 250301 |
| P0R 1L0 | THESSALON | F | SAULT STE MARIE STAR; P56 | 250301 |
| G6G 5T3 | THETFORD-MINES | 5 | DISHES BROKE; LA PRESSE, P69 | 250301 |
| P7C 5V3 | THUNDER BAY | 0 | RF 1; ENTRY #132 | 250301 |
| C0B 2B0 | TIGNISH | 4 | AWAKENED; WINDOW RATTLED; RF 2; 4TH FLOR | 250301 |
| P4N 1B3 | TIMMINS | 4 | SANDY GROUND;RF 3; ENT#142; ALSO CANADAIAN PRESS | 250301 |
| M5H 2N2 | TORONTO | 4 | STRONG SHAKINGS ; TOR TEL MAR ; MANY OTHER REPORTS | 250301 |
| E0C 2B0 | TRACADIE | 4 | RF 4; ENTRY#8 | 250301 |
| G0L 4K0 | TROIS-PISTOLES | 3 | ENTRY 289 | 250301 |
| G0L 4K0 | TROIS-PISTOLES | 5 | DAMAGE LA PRESSE P 70; RF 6 | 250301 |
| G9A 5H3 | TROIS-RIVIERES | 6 | ENTRY 329; DAMAGE TO WATER TOWER; MON DAILY STAR MAR 2 | 250301 |
| B2N 5C5 | TRURO | 3 | RF 2; ENTRY#18 ALSO HALIFAX HERALD P 110 | 250301 |

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| KKK UNO | UNO PARK | 3 | THE NUGGET; ALSO P 86 | 250301 |
| L0C 1K0 | UXBRIDGE | 4 | THREE REPLIES; RF 3; ENT #143 ALSO WHITBY GAZETTE P 110 | 250301 |
| J0L 2P0 | VARENNES | 5 | STATUES FELL; LA PRESSE; P65; | 250301 |
| G6P 6T2 | VICTORIAVILLE | 4 | LA PRESSE, P69 RF 6 | 250301 |
| J0X 3G0 | WAKEFIELD | 4 | RF 4; ENT#92 | 250301 |
| K0K 3K0 | WARKWORTH | 4 | PETERBOROUGH EXAMN; P46; RF 3 | 250301 |
| J0E 2N0 | WATERLOO | 5 | CLOCKS STOPPED; WATERLOO JOURNAL P. 111 | 250301 |
| P0P 2G0 | WEBBWOOD | 4 | RF 3; ENT#145 | 250301 |
| L3B 3Z0 | WELLAND | 3 | WELLAND TRIBUNE AND TELEGRAPH P 112 | 250301 |
| L1N 2M8 | WHITBY | 3 | WHITBY GAZETTE AND CHRONICLE P 111 | 250301 |
| N0H 2T0 | WIARTON | 3 | RF 2; ENT#146 | 250301 |
| N0H 2T0 | WIARTON | 0 | RF 2; ENT #146 | 250301 |
| K0L 3C0 | WILBERFORCE | 4 | RF 2; ENT#147 | 250301 |
| K0L 3C0 | WILBERFORCE | 3 | RF 2; ENT#147 | 250301 |
| NNN WIL | WILLIAMSBURG | 4 | SHATTERED GLASS IN HENHOUSE; NEAR KITCHENER; P 20;KIT DAILY | 250301 |
| GGG WIN | WINDIGO | 4 | RF 3; ENT#148 | 250301 |
| B0N 2T0 | WINDSOR | 3 | RF 3; ENTRY#19 | 250301 |
| N9A 6S1 | WINDSOR | 3 | RF 2; ENT#144 ALSO BORDER CITIES STAR P 111 (WALKERVILLE) | 250301 |
| B0P 1X0 | WOLFVILLE | 4 | THE ACADIAN P 112 | 250301 |
| N4S 7W5 | WOODSTOCK | 3 | MAYBE 4, NUMEROUS PRESS ARTICLES P 112 | 250301 |
| G0X 3L0 | YAMACHICHE | 7 | DAMAGE; ALMONTE GAZ, LA PRESSE; FISSURES; GLOBE V3 P107; RF7 | 250301 |