

THE PRESIDENT

IN COMPLIANCE

With a resolution of the Senate in relation to the survey to ascertain and designate the boundary-line between the State of Michigan and the Territory of Wiskonsin.

FEBRUARY 3, 1841.

Read, and ordered to be printed; and that 500 additional copies be furnished for the use of the Senate.

To the Senate of the United States:

I respectfully transmit, herewith, a report and accompanying documents. from the Secretary of War, in answer to a resolution of the 22d of December, 1840, requesting the President "to transmit to the Senate any information in his possession relative to the survey directed by the act of the 12th of June, 1838, entitled 'An act to ascertain and designate the boundary-line between the State of Michigan and Territory of Wiskonsin."

M. VAN BUREN.

Washington, February 1, 1841.

WAR DEPARTMENT, February 1, 1841.

Sir: The accompanying report of the Colonel of Topographical Engineers, detailing the measures taken for ascertaining and marking the boundary-line between the State of Michigan and the Territory of Wiskonsin, and the progress which has been made therein, is respectfully submitted in reply to the resolution of the Senate of the 22d December last, calling for information on that subject, which was referred by you to this department.

Very respectfully, your most obedient servant,

J. R. POINSETT.

To the President of the United States.

Blair & Rives, printers.

BUREAU OF TOPOGRAPHICAL ENGINEERS, Washington, January 30, 1841.

Sir: A resolution of the Senate, dated the 22d of December, 1840, referred to this office for a report, calls upon the President "to transmit to the Senate any information in his possession relative to the survey directed by the act of the 12th June, 1838, entitled 'An act to ascertain and designate the boundary-line between the State of Michigan and the Territory of Wiskonsin.'"

There is a second act of Congress on this subject, dated the 20th July, 1840, which places the superintendence of the survey of this boundary under the War Department. Although this second act is not referred to in the resolution of the Senate, yet, as the information collected under it is highly essential to a correct understanding of the matter, it will be submitted as a part of this report.

The letter herewith enclosed, and marked No. 1, from the Commissioner of the Land Office, gives a history of the proceedings under the act of June, 1838; and the reports from Captain Cram, Nos. 2 and 3, give detailed ac-

counts of those under the act of July, 1840.

From these documents it will be seen that the boundary cannot well be surveyed without additional legislative action, as well in reference to the description of the boundary, as to funds.

Captain Cram estimates a sum of \$13,000, in addition to the previous appropriation of \$3,000, for the completion of this survey; which is respectfully recommended to your consideration.

I have the honor to be, sir, your obedient servant,

J. J. ABERT, Col. Corps Topographical Engineers.

Hon. J. R. Poinsett, Secretary of War.

No. 1.

GENERAL LAND OFFICE, January 4, 1841.

SIR: In answer to the resolution of the Senate, passed on the 22d ultimo, referred by you to this office on the 29th ultimo for a report, and herewith

returned, in the following words:

"Resolved, That the President of the United States be requested to transmit to the Senate any information in his possession relative to the survey directed by the act of the 12th June, 1838, entitled 'An act to ascertain and designate the boundary-line between the State of Michigan and

Territory of Wiskonsin," I have the honor to state—

That, in pursuance of your letter of the 27th of February last, communicating the order of the President that this office should take charge of the business of surveying and marking the line in question, under the act of the 12th of June, 1838, and directing that it should be entered upon without delay, the preparation of the necessary instructions was immediately commenced at this office; at the same time, for the purpose of carrying into effect the suggestions of the honorable Messrs. Norvell and Crary, of Michigan, made in their joint communication to the President, of the 24th

of February last, that the survey might be made by some officer of the corps of topographical engineers, a correspondence was opened, with your approbation, with the Secretary of War, which, in the beginning of April last, resulted in the appointment of Lieutenant Colonel Kearney, of this service. A short time after which, in consultation at this office, he gave it as his opinion, that the appropriation of \$3,000, made by the act to defray the expense of the survey, was entirely inadequate for the purpose; and, under the proviso contained in the law, "that the whole expense of surveying, marking, and designating the said boundary-line should not exceed that sum," and especially as it had been represented that the line to be run was an impracticable one, the action of this office was necessarily deferred until further legislation by Congress. Subsequently, by the second section of the act entitled "An act making appropriations for the support of the army for the year one thousand eight hundred and forty," approved July 20, 1840, (see pamphlet Laws, 26th Congress 1st session, page 51,) the abovementioned sum of three thousand dollars was reappropriated, "to be expended, under the direction of the Secretary of War, for the accomplishment of the same object;" since which, this office has had no further control of the business.

Copies of the correspondence of this office, relative to commencing the survey under the original act, and the appointment of Colonel Kearney, have not been made out to accompany this report, not being deemed material; but, if required, will immediately be made and transmitted.

All which is respectfully submitted.

I am, sir, your obedient servant,

JAMES WHITCOMB, Commissioner.

Hon. Levi Woodbury, Secretary of the Treasury.

No. 2.

Report on the survey of the boundary between the State of Michigan and the Territory of Wiskonsin.

DESCRIPTION OF THE BOUNDARY.

"To the mouth of Montreal river (of Lake Superior;) thence through the middle of the channel of the said river Montreal, to the middle of the Lake of the Desert; thence in a direct line to the nearest head of the Menomonee river; thence through the middle of that fork of said river just touched by the said line, down the centre of the main channel of the same, to the centre of the most usual ship-channel of the Green bay of Lake Michigan; thence through the centre of the most usual ship-channel of Green bay, to the middle of Lake Michigan; thence," &c.

Such is the language of the description contained in the letter of instructions of date July 30, 1840, from the Topographical Bureau, and which is presumed to have been quoted from the act of Congress concerning this

boundary

In the same letter of instructions, explicit directions were communicated

with reference to the place of commencing the survey. In obedience to these directions, the survey was commenced on that part of the boundary which may be called imaginary, or that which is not characterized or marked by natural or physical features, viz: the portion between the head waters of the Montreal and Menomonee rivers.

On a careful reading of the foregoing description of the boundary, it will

be inferred-

1st. That Lake of the Desert was supposed, in the act of Congress, to be a head-water of, and to discharge itself into, Montreal river; for the words in the description are, "thence through the middle of the channel of the said river Montreal, to the middle of the Lake of the Desert."

2d. That somewhere between Lake Superior and Green bay, there was a known lake bearing the name "Lake of the Desert;" for the language describing the boundary specified that the "middle of the Lake of the Desert"

shall be a point in the boundary.

3d. That of all the head-waters discharging themselves into the Menomonee river, one would be found nearer to the said Lake of the Desert than any other; for the description says, "thence in a direct line to the nearest head of the Menomonee river."

4th. That the nearest head of the Menomonee to the said lake would be found to be a branch of the Menomonee, and not a lake; for the description reads, "thence through the middle of that fork [branch] of the said river just touched by the said line, down the centre of the main channel of the same." Ac

The four suppositions here enumerated were doubtless made by the committee of Congress who draughted the description of the boundary, and predicated on information derived from a map similar to one entitled "map of the entire Territories of Wiskonsin and Iowa, published by order of the Legislative Assembly of Wiskonsin, by L. Judson," and which was supposed to present a more accurate delineation of the waters between Lake Superior and Green bay than any other map extant.

An exact copy of as much of said map as is necessary for illustration is

attached to this report, and marked No. 1.

Upon this map it will be perceived that the boundary between Michigan and Wiskonsin is laid down as following a direction from Lake Superior nearly southeast to Green bay; and that the courses of the Montreal and Menomonee rivers, taken together, constitute a general route in the same direction; and that Lac Vieux Desert (Lake of the Desert) is not only represented on this map as being the head of the Montreal, but is likewise

represented as the head of the Menomonee.

Now, although the map from which No. 1 has been copied bears the high sanction of a legislative assembly, it is proven by the survey that that portion of this map upon which the boundary is laid down is exceedingly erroneous; and therefore, if it be true that this map, or one similar to it, was taken as a guide in draughting the description of the boundary, it is not surprising that the said description, so far as it relates to the head-waters of the Montreal and Menomonee, is so worded that the conditions of the act defining the boundary cannot be complied with, to the full extent of all the requirements contained in said act.

The survey was prosecuted as far as the inclemency and rigor of the advanced stage of the season would permit; but if there had been ever so much time left, and ever so genial a temperature for field operations, the

survey could not have been carried any further, on account of having reached a point, beyond which the description of the boundary ceased to be

in accordance with the physical character of the country.

It was ascertained that Lac Vieux Desert, or "Lake of the Desert," has no connexion whatever with the Montreal river; and that the nearest distance between said lake and this river is such, that an Indian requires eight days, without a pack, to pass from one to the other: and it is also believed, with much confidence, that the Montreal river does not head in a lake, but takes its rise in an extensive swamp. Neither is Lac Vieux Desert, or "Lake of the Desert," at all connected with the Menomonee river; but this lake was found, contrary to the opinions of all except the Indians, to be the principal head of the Wiskonsin river.

The Montreal river was found to have a course different from what was supposed; so have the courses of the Menomonee, and of its principal

branches, been equally mistaken and misrepresented.

Map No. 2, which is attached to this report, exhibits a more faithful delineation of the country between Lake Superior and Green bay, along the route of the boundary, than any other map; for it has been made up from actual reconnoissances, explorations, and minute surveys of the route which it represents. Still, this map should only be regarded as an approximation to the truth: that part of it, however, which represents the district between Lac Brulé and Lac Vieux Desert, and which it was necessary to survey, is accurate; being made from minute surveys. The same degree of accuracy is to be attributed to the portion between the mouth of the Menomonee and the White rapids, and to that portion immediately north of Green bay, and to the portion representing Green bay itself. The other parts of the map are made from reconnoissances and explorations of the ground, and from information derived from Indians whose representations are entitled to confidence.

And here it may be well to remark, for the benefit of those who may hereafter be sent upon a similar duty into this wild region, that information derived from French voyageurs, (or, more properly, French fur packers,) who traverse the country to collect furs for traders, cannot be relied on, as a general rule, with so much confidence as that which may be elicited from the Indians. The chief aim of the voyageur, while collecting his pack of furs, is to pass from one point to another in the least possible time; so intent is he upon accomplishing this, that he performs his trip with no more observation upon surrounding nature than is evinced by a stage-horse in passing from one relay to another. Not so, however, with the native born Indian hunter: he knows every stream, swamp, lake, hill, or dale, that comes within the circuit of his beat, with a surprising minuteness: and there are those among the band who will impart information to one who will take the trouble and proper course to win their confidence. Much valuable information, pertaining to the route of the boundary, was obtained from Indians.

I am under obligations to Ramsay Crooks, Esq., president of the American Fur Company, for information derived from him, as well as from a small sketch of a portion of the Chippewa country with which he favored me in the fall of 1839. The information obtained from this gentleman has been of service, and is embodied (with slight corrections consequent upon a personal examination of the ground) in map No. 2.

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Map No. 3, which is affixed to this report, represents, on a large scale, that portion of the country which was minutely surveyed between Lac Brulé and Lac Vieux Desert: it also represents a part of Brulé river—that fork or head or branch of the Menomonee which is found to be situated nearest the lake, called in the act of Congress "Lake of the Desert;" which, however, is more generally known by the name Lac Vieux Desert. From this map it will be seen that the portion of the act of Congress, or of the description of the boundary, which reads "middle of the Lake of the Desert; thence in a direct line to the nearest head of the Menomonee river," can now be complied with, and the "direct line" run on the ground or laid down on the map, provided the starting-point, "the middle of the Lake of the Desert," shall be first fixed. But it may be asked, what is "the middle of the Lake of the Desert?" From the contour of this lake, which is exhibited on map No. 3, it will at once be perceived that the term "middle," as applied to it, is very indefinite; and that it would require much labor to determine its middle, and to establish a monument so as to mark a corner or a point in the boundary. The labor, of course, would not be objected to; but if required to be performed, means adequate to the end should be provided.

Again: from the course which the Montreal river is now found to have, and from the fact that Lake of the Desert has no connexion whatever with this river, it will also be perceived that it would be impossible to run a line according to the meaning of the words in the description of the boundary, "thence through the middle of the channel of the said river Montreal, to the middle of the Lake of the Desert." It is true, that the channel of the river might be followed to its very head, and from this head a line could be run over the ground to the middle of the Lake of the Desert; but it is not presumable that such a random line was ever intended by Congress to constitute any portion of the boundary in question. It was undoubtedly supposed that the Lake of the Desert was the head of the Montreal; and that a natural boundary would be found to be provided all the way from the mouth of the Montreal to the middle of said lake; and that it would only be necessary to mark out a line from the middle of this lake to the nearest

head-water of the Menomonee river.

From this interpretation, it will be evident that the instructions from the Bureau of Topographical Engineers have been fully complied with; and that the survey of the boundary has been prosecuted as far as was practicable under those instructions for this season, notwithstanding the difficulties which were encountered.

From the foregoing discussion of the route, it will now appear that it would be exceedingly difficult, yea, utterly impossible, to run the boundary-line in complete accordance with the present reading of the description in the act of Congress; particularly on that part of the ground between the Montreal river and the head of the Menomonee (the Brule river) which comes nearest to "Lake of the Desert." And from all the circumstances of the case, it is evident that another action of Congress will be required in relation to this boundary, to the end of defining it in such a manner that it can be established either upon the ground, or laid down on a map, with that degree of definiteness which should always characterize a boundary-line between two States.

Here the subject might be dropped by me; but as the survey has developed information which may be of use in the event of any future legislation,

it is deemed proper, and, in any event, I trust it will not be regarded officious in me, to present the following suggestions as a part of this report:

There is no doubt of Lac Vieux Desert (as written on the map, and generally so called) being the identical lake with that which seems to have been intended in the description of the boundary, and therein called "Lake of the Desert," and whose middle is made one point of the boundary.

The three islands of this lake have, from their relative positions, been

named South island, Middle island, and North island.

Lac Vieux Desert, now being known, might be brought into the boundary, by specifying some point within the periphery of the lake for one physical point of the boundary. All indefiniteness, much labor, and expense, would be avoided by simply saying, in the law, that the highest point of ground (whether of earth or rock) upon Middle island shall be the point, instead of saying "middle" of the lake.

The present description of the boundary makes the "middle of the channel" of the Montreal river a part of the boundary. The term "middle of the channel" is indefinite, because islands may occur, which would of course cause more than one channel. By specifying which channel in such cases shall be followed by the boundary-line, another ambiguity would be avoided. It is also evident, that it should be specified how far up the Montreal the boundary shall extend, before leaving for Lac Vieux Desert. For example: the law might specify that the boundary, in ascending, shall follow the extreme right-hand channel, from the mouth of the river, up to where it shall be found to be intersected by a straight line drawn from the highest point of Middle island, to some specified point of Montreal river. Such a description would be divested of vagueness, and would allow of this portion of the boundary being established at comparatively less cost.

As the shortest line from said point on Middle island to the nearest water flowing into the Menomonee would probably terminate in a swamp, (see map No. 3,) it would be well to say that this part of the boundary shall be a direct line from the highest point of Middle island to the middle of the channel of the outlet of Lac Brulé; thence through the middle of the Brulé

river, &c.

The "centre of the main channel" of the Menomonee river is made a part of the boundary. This river contains numerous islands, and consequently more than one channel where these islands occur. It will be impossible in many of these cases to know which is the "main channel," without minute surveys. In many cases it was tried, and found impossible to decide by a simple inspection or reconnoissance which was the "main channel." It should also be remarked here, that the term "main channel," applied to the multiplicity of channels of the Menomonee, would be somewhat ambiguous in any event; for, it may be asked, is the main channel the widest channel of the river, or is it the deepest? If it be the widest or deepest now, will it be the widest or deepest hereafter? or shall the main channel be that through which the greatest quantity of water shall be found to pass at the time of the survey? And if it should occur that two channels at the same island pass equal quantities of water, which would then be regarded as the boundary? These questions are sufficient to show the indefiniteness of the term "main channel." There are also a few islands in the Brulé river, to which similar questions might apply, in reference to the term "main channel."

To avoid all ambiguity in reference to these channels, it might be specified in the act defining the boundary, that, in descending the stream, the boundary shall follow the extreme left-hand channel of the Brulé, and the extreme right hand channel of the Menomonee, down to a well known point of the river—say Pe-me-ne falls; and thence to follow the extreme left-hand channel of the remainder of the Menomonee to its mouth. Such a division would leave some of the islands in Michigan, and the remainder in Wiskonsin, and would avoid much expense in minute surveys to ascertain the "main channel," and would leave no indefiniteness upon this part of the boundary. The free use of either channel for the purposes of navigation would, from an established principle of law, be open at all times to the citizens of either State, and the islands would be nearly distributed in equal proportions between the two States.

After descending the channel of the Menomonee "to the centre of the most usual ship-channel of the Green bay of Lake Michigan," the boundary is made to run "thence through the centre of the most usual ship-chan-

nel of Green bay, to the middle of Lake Michigan."

From map No. 4, which accompanies this report, it may be inferred that the islands which are in the eastern part of Green bay would cause several It is a well-known fact to all who have any personal ship channels. knowledge of the navigation of this bay, that there are at least two shipchannels, which are in use by all classes and kinds of craft that navigate the great lakes. It would be next to an impossibility to collect the testimony that would be necessary to decide the question, which of these is the "most usual ship-channel of Green bay?" And it is not easy to conceive any other mode (than by testimony) by which the "most usual ship-chan-But suppose this method of collecting testimonel" could be ascertained. ny practicable: it might occur that all the evidence that could be obtained on the subject would prove that one of these channels is just as much in use as the other; in which case, it would only be shown that there is no such thing as the "most usual ship channel" in this part of the bay.

Although the term "most usual ship channel" is used in the description of the boundary, still it is rather to be presumed that this term was intended to imply in the act of Congress the best ship-channel of all that may be found in that portion of Green bay referred to. An equitable construction of the law would convey this idea; for, it is not to be presumed that, of two States bordering upon navigable ship-channels, either State would or could, in equity, claim to appropriate the best of these channels exclusively to her-

self.

If the interpretation of the term "most usual ship channel," implying the best ship-channel, be correct, it will be necessary to make a complete hydrographic survey of all the channels that exist in that portion of Green bay east of the mouth of the Menomonee river, in order to discover the best ship-channel (if there be such) among all the ship-channels now in use in that part of the bay.

After this survey shall have been made, the particular channel along

which the boundary shall run may be declared.

It is important to the interests of Michigan and Wiskonsin that this part of the boundary be immediately ascertained, on account of the question of jurisdiction over the islands in the eastern part of the bay.

With the modifications now respectfully suggested, the description of the

boundary would be to the following effect, to wit:

"To the mouth of Montreal river (of Lake Superior;) thence (in ascending) through the centre of the extreme right-hand channel that the said Montreal river may be found to have, as far up the same as where the said channel shall be found to be intersected by a direct line drawn from the highest point of ground on Middle island of Lac Vieux Desert, north* — degrees west; thence (from the said intersection) along the just described direct line, to the said point of Middle island; thence (from the said point of Middle island) in a direct line to the centre of the channel of the outlet of Lac Brule; thence following the centre of the extreme left hand channel of Brulé river (Wesacota sepe) down to the middle of the channel of the Menomonee river; thence following the centre of the extreme right-hand channel of the Menomonee river, down the same, to the head of Pe-me-ne falls; thence following the centre of the extreme left-hand channel of the Menomonee river, down to the centre of the best ship channel of the Green bay of Lake Michigan; thence following the centre of the best ship channel of Green bay, to the middle of Lake Michigan."

Such a description as this, if authorized by Congress, would allow of the boundary being established without any material difficulty; and it would cause no material departure from what is conceived to have been the intention of the law as it is now worded. The proposed description would moreover leave the State of Michigan and the Territory of Wiskonsin with nearly the same relative quantities of territory as they would have respectively possessed had the Montreal, and the Menomonee, and Lac Vieux Desert, been found situated as was supposed in framing the present law of the boundary. Besides, the field operations, which will be necessary to establish the boundary, would be attended with much less expense, on account of having to make no minute surveys of the islands (and consequent

channels) in the Montreal, Brulé, and Menomonee rivers.

Owing, however, to the absence of all facilities in a wilderness like that of the route of this boundary, the cost of the necessary operations for establishing the boundary between the mouth of the Montreal and Lac Vieux Desert, thence to the outlet of Lac Brulé, will not be less than \$10,000; and the cost of the survey of the eastern part of Green bay, to discover the best ship channel, will be not less than \$3,000. These sums being exclusive of what has already been appropriated.

I have the honor to be, sir, very respectfully, your obedient servant, TH. JEFFERSON CRAM,

Captain Top. Eng.

December, 1840.

To J. J. ABERT,

Col. Topograpical Engineers, Washington.

^{*} The number of degrees left to be fixed by the proper authority.

No. 3.

APPENDIX,

Containing some account of the route, &c., of the boundary between the State of Michigan and the Territory of Wiskonsin.

MONTREAL RIVER.

This river is not of that importance that one would suppose from a mere inspection of its delineation upon map No. 1. The river does not take its rise so far south as was supposed, nor does it head in a lake. Its course is more nearly parallel with the coast of Lake Superior. (See map No. 2, attached to the report proper.) It is not navigable even for the smallest class of canoes, except in times of high water. Then the Indians can make the descent; but are obliged to make numerous portages around the falls and rapids, which are precipitous and dangerous.

The lake seen represented on map No. 2, between the head-waters of the Ontonagon and Chippewa rivers, is properly the head of the former; but, in times of high water, passages for canoes may be found from the lake into the Chippewa river. From these circumstances, the Indians are in the habit of regarding this lake as the head of both rivers—the Ontonagon and the Chippewa.

LAC VIEUX DESERT.

The country in the vicinity of this beautiful lake is called, in Chippewa language, Ka-ta-kit-te kon, and the lake bears the same name. (See map No. 3.) On South island there is an old potatoe-planting ground; hence the appellation of "Vieux Desert," which, in mongrel French, means old planting-ground. There is certainly more reason for calling it "Lac Vieux Desert," than for the appellation "Lake of the Desert." It is much to be regretted that the Indian names of rivers, lakes, and places, are so frequently changed without any reason, and in most cases for the worse.

About this favorite lake, and on its islands, the chief Ca sha o sha takes up his summer residence; but, on the approach of winter, migrates with his band towards the south, following the deer for the winter hunt. Some of the hunters disperse themselves along down the Wiskonsin river, and others down on the branch of the Menomonee called Mus kos se pe. (Sepe is the Chippewa for river.)

Ca-sha o sha, who is one of the principal chiefs of the Chippewa confederacy, is shrewd and intelligent, and has considerable influence in the councils of the nation, although at the head of only a small band, numbering, by his own account, only about one hundred men, women, and children; a small number, indeed, for so large an extent of domain properly under his jurisdiction. His number of fighting men is estimated at about forty.

Immediately on descrying the signal flags of the surveying party, some of the principal men of the band assembled, and came in a body to our camp, and formally notified us to desist work, representing that the land upon which we were running the line does not belong to their great father, (the President of the United States;) that it was Indian ground, and that we were encroaching upon their rights, and that we could be allowed to go no

farther towards the setting of the sun into the Ka ta kit te kon country, and that we must immediately turn back for the place whence we came. This occurred about eight miles east of Lac Vieux Desert, while employed in triangulating Sandy lake, upon which our flags had first been spied.

For some time, serious apprehensions were entertained that all further work might be stopped, and the party compelled to retreat, without accomplishing the object of reaching Lac Vieux Desert. But, on an interview with the chief, (Ca-sha o sha,) who, having been apprized by his people of our approach, arrived in state at our camp the next day, all opposition was removed by amicable negotiation and purchase of the right of way through the Ka-ta-kit-te kon country, with the privileges of cutting as much wood, drinking and otherwise using as much water, hoisting as many flags, looking as many times through our telescopes over the lakes, and pitching our tent, as we should think necessary and proper; and also of passing unmolested all the way through to the river Montreal. Such were the conditions of the treaty between the chief of the Ka-ta kit-te kon band and the chief of the surveying party. And, finally, before leaving, such a friendly footing was established, that the officer who may hereafter be sent to Ka-takit-te-kon, for conducting the further prosecution of the survey, need not entertain any apprehensions of opposition from Ca-sha-o-sha's band; provided, in the outfit of the party, suitable presents be taken along and judiciously distributed, upon the principle of "quid pro quo," among the principal men. The cost of such presents to the United States need be but a trifle, compared with the value of information and assistance, in the way of guides, that may confidently be expected in return from the chief and his people.

A neglect on the part of the officer to provide himself with these pre-

sents, may be the cause of defeating a whole season's work.

The Ka-ta kit-te-kon Indians are far removed into the interior from white settlements on every side, and are consequently less debauched in their habits, and may be taken as a tolerably fair specimen of the Chippewa people; such as they were before the degrading process was commenced. This band are social, not very obtrusive, but talkative, gay, and seemingly happy. They are of large, commanding stature, and of good deportment; they are well clothed and fed, and their women do not present that squalid, servile aspect, which is observable in some of the other northern tribes.

The Ka-ta kit te kon Indians go to the trading-posts of La Pointe, on Lake Superior, of Lac du Flambeau, and of the Menomonee, to exchange their pettries for Indian goods; and, judging from the clothing of these people, the condition of their wigwams, their cooking utensils, and other conveniences for living, it was inferred that very little whiskey, or "firewater," finds its way to their villages. Nevertheless, there is the same hankering after this beverage as is in all other Indians who have once tasted

the draught so as to have experienced its exhilirating qualities.

The Ka-ta-kit-te-kon country occupies a high level above Lakes Superior and Michigan, and abounds in small lakes, which constitute the heads of several rivers. The water of these small reservoirs, and of the streams generally, is cold and limpid. Some of the lakes were observed to contain the speckled trout—such as are generally met with in high latitudes in the United States. The scenery of these lakes is beautiful, and the land adjacent to them is better than is generally believed by those who have not had the opportunity of a personal examination. The country is not moun-

tainous, but may be denominated "rolling." The growth of timber is tolerably heavy, consisting of white and yellow pine on the borders of the lakes; in some instances of cedar, fir, hemlock, and tamarack; and a little back of the lakes, of sugar maple, white maple, white and yellow birch, poplar, bass, and hemlock. The soil is of a nature to be adapted to the culture of wheat, rye, grass, oats, flax, hemp, and potatoes. In some places the soil is rocky, although no very large masses or ledges of rock were observed.

The manufacture of maple sugar is carried on to a considerable extent by the people of this region. Many of their "sugar bushes" were observed, and, from the oldness of the marks upon the trees, the Indians must have known the art of extracting this luxury from their forest from an

early date of their history.

A very good kind of potato is raised here, and the mode of preserving which was entirely new to us. The potatoes, which are of an oblong shape, and not larger than a man's thumb, are partially boiled, and carefully peeled while hot, without breaking the pulp, and strung, like so many beads, upon a twine or tough thread of bark, and then hung in festoons on the ridge-pole of the wigwam, over the smoke of the fire, where they become thoroughly dry. This process renders the potato fit for transportation and use during the severest frost without injury. The squaws take great interest in preparing this article of food, which is about the only vegetable they pretend to cultivate.

This district of country is tolerably well provided with deer, beaver, otter, martin, mink, muskrat, ducks of various kinds, fish, teal, wild geese,

and partridges. Deer, however, are not so plenty as farther south.

Winter usually sets in about the 20th October in the Ka-ta-kit-te kon region. This year, (1840,) from the 20th to the 28th October, the mercury in Fahrenheit's thermometer ranged as low as from nine to twolve degrees below freezing; and for several days during the latter part of October, it was continually snowing. On the return of our party, Sandy lake outlet had become so much frozen as to make it necessary to drag the canoes on the ice, and the ice was making very fast in all the lakes and streams; this, on the very last days of October.

Near the south end of the small lake Ca sha ca-we ca-mas, (see map No. 3,) the variation of the magnetic needle was determined by means of

the pole-star, and found as follows:

Variation 6° 11' east, at 8 o'clock, A. M., 26th October, 1840; temperature, 16° Fabrenheit.

BRULE RIVER .- (IN CHIPPEWA, WE-SA-CO-TA SE-PE.)

The French voyageurs have called this river Brulé, (burnt,) from the circumstance of the timber having been destroyed by fire adjacent to its

banks, near its junction with the Menomonee.

The Brulé is one of the principal head branches or tributaries of the Menomonee, and is that branch which comes nearest Lac Vieux Desert. It heads as represented on map No. 3, and has a rapid current, and varies in width from eighty to one hundred and twenty feet. It has a rocky bed, and is generally so shallow as to render it difficult to ascend it with canoes of three hundred pounds burden, except in times of high water. The banks of the Brulé, or We sa-co-ta, are thickly studded with white cedar,

fur, poplar, tamarack, white birch, and pine, for a great portion of its extent. So dense is the growth of timber immediately on the banks, that it is very difficult for one to work his way through it; and for many miles the cedars overhang the river from both sides, so as to lap by each other, and there is barely room under the leaning trunks for the passage of a canoe. In many instances, the passage has been made by cutting away the cedars. time of ascending this river from its mouth to Lake Brule, in canoes of three hundred pounds burden, is six days, supposing the water at a high stage; and the time of descending, with the canoes lightly loaded, is two days and a half. There are only two portages in the We-sa-co-ta; they occur near together, about ten miles above its confluence with the Menomo-The first fall, in ascending, occurs at the meeting of the Me-squacum-me cum with the We-sa-co ta: at this portage, the canoes, as well as the loading, have to be taken around the falls; at the upper portage, the loading only is carried around; the canoes are floated over the rapids.

On merely viewing the banks of the We-sa-co-ta, while passing along in a canoe, one might infer that the land of the valley of this stream is of a very inferior quality; on retiring, however, from the river only to a distance of some few hundred yards back, up-land, having a good growth of hard wood timber, is found, and the land presents a much more favorable

aspect, and would be regarded as tolerably good for the latitude.

Along the banks of the river, Indian camping grounds are occasionally met; occurring more frequently in proportion as we ascend the river; but none of the Indians were found at these places. At the proper seasons, the We-sa co-ta is resorted to for the beaver and otter that exist along its whole course. There are indications of its once having been abundantly stocked with these animals; but the trappers have made such havoc among them of late years, that the stock has become very much reduced.

MENOMONEE (ME-NE-CA-NE) RIVER.

This river passes a large volume of water into Green bay at all seasons of the year; and yet is subject to very considerable variations in height, consequent upon the fluctuations of its principal tributaries, which are themselves rivers of considerable size. These principal head branches or tributaries are, We-sa-co-ta se-pe, Me-squa-cum-me-cum se-pe, Pesh-e-cumme se-pe, and Mus-kos se-pe. (See map No. 2.) Very little information only could be obtained relative to the Me-squa-cum-me-cum; its course, however, is very nearly as represented on map No. 2, and it is very difficult of ascent with canoes.

The Pesh-e-cum-me enters the Menomonee immediately after tumbling over a perpendicular wall of rock of twenty five feet in height. These falls burst upon the sight all of a sudden, and present a highly picturesque feature. The route of the Pesh-e-cum-me is that which is sometimes taken in coming from Lake Superior to Green bay; but the great number of portages, and the difficulties attending the passages around the falls and rapids in this river, make this part of the route very laborious to the canoemen; hence the route farther east, by the way of "Bay de Noquet," is the one more usually taken.

The tributary of the Menomonee called Mus-kos se-pe, is so low in summer as to be unnavigable for any but the smallest of canoes, and in some seasons it is almost dry. There are no lakes at its head, which is one rea-

son for its low stages of water. The valley of this river is long, and contains deer in great abundance; and, consequently, much resorted to by Indians from various quarters for the winter hunt. This river is called by some "Pine river."

The country adjacent to the upper part of the Menomonee, for about thirty miles on both sides, has an exceedingly desolate appearance; all the timber, which was once pine, has been consumed by fire, as far as the eye can reach, all round on every side. The prospect is one of a broken landscape of barren hills, studded here and there with charred pine stubs, with scarcely a living tree, except the second growth of white birch and poplar. The soil of the hills is rocky, and unfit for cultivation. Within this burnt and barren region, the only agreeable relief is found in two perpendicular falls of the Menomonee, about half a mile apart, of nine feet in height. Here short portages have to be made. The names of these falls could not be ascertained, and, from a reluctance to assign names different from the Chippewa, they are not named on the map. Within the burnt district there is a part of the river called "Bad Water," where there is an Indian village and planting ground; the people of this village are called, in English, "Bad Water Indians." Potatoes only are cultivated here; it is too far north for corn to ripen before the coming of frost.

The burnt district, in descending the Menomonee, terminates at the head of Big Quin-ne-sec falls, where there is a difficult portage of one and a half mile in extent. The total fall of water, from the upper to the lower pool, in this distance, is one hundred and thirty-four feet. This amount is divided into several chutes, with intervening rapids. The general aspect of this series of water falls is exceedingly picturesque; at every change of the point of view, new and varied beauties are perceived; but the lower falls of the series is by far the most magnificent of all the cascades of the Menomonee: here the whole river is seen in terrible frenzy, dashing, in mighty masses of foam, over a perpendicular wall of rocks of forty feet in height. The effect of this stupendous cataract is such as may possibly be imagined,

but not easily described.

The scenery, for some miles immediately below these falls, is quite tranquil; the river is wide—in many places six hundred feet—and dotted here and there with small islands, bearing a heavy growth of timber.

A young doe was descried in the act of swimming from one of these islands. In a few minutes she was so completely hemmed in by our little fleet of canoes, that, with the aid of a shot or two, her capture was speedily effected.

Next in order, the Little Quin-ne-sec falls occur, where the fall is about thirty-five feet in an extent of two hundred and fifty feet; and the total width of the river is only about eighty-five feet. Here the bed and banks are composed of slate rock. The name Quin-ne-sec is derived from what the Indians take to be smoke, and which is seen continually ascending from the bottom of the torrent high into the air. This smoke, of course, is but the spray of minutely divided particles of water, arising from the fluid dashing against the projecting rocks.

The portage around these falls is short, but very steep, and difficult to make; requiring one hour and a half to pass the loading and canoes. Below this portage, on the east side of the river, there extends along, parallel with the stream, a remarkable bluff or ridge of high rock formation, whose heig't varies from one hundred to one hundred and fifty feet, and the face

towards the river is nearly vertical. The rock is of slaty structure.

At a short distance below, Sandy portage occurs; being about one mile in extent, and requiring about half a day to make the passage. Here the fall is not perpendicular, but nevertheless beautiful; not presenting, how-

ever, the grandeur of Quin-ne-sec scenery.

After leaving the last-mentioned portage, in descending the Menomonee, the falls, all the way to its mouth, are nothing more than chutes of various declivities. And here it may be remarked, that the idea hitherto entertained by some, of there being such immense perpendicular falls on this river as are recorded on some maps, is very erroneous. It is gravely stated on the map of which No 1 is a copy, that there is a fall of seventy-five feet perpendicular; and it is as gravely asserted on others, that there are falls of one hundred and eighty, and over two hundred feet vertical.

Sturgeon falls, which come next below Sandy portage, have but thirteen and three-fourths feet fall in an extent of one thousand feet. Above these falls no sturgeon are found, but they collect in great quantities at the foot of the chute. The entire body of water in the river rushes through a straight cleft or gap in the rocks, at this place of not more than eighty feet in width; the summit of the hill, through which the cleft has been made, is one hundred feet above the lower basin of the chute. With such a contracted channel, and a fall besides of thirteen and three-fourths in the thousand, it may be imagined that it would be quite as impossible for a canoe to make the descent in safety, as for a sturgeon to make the ascent.

The portage here is short but difficult, owing to the steepness of the

bill.

The scenery about these falls is picturesque, and the place is quite a resort for Indians; not so much, however, for the gratification of a taste for beautiful scenery, as for the gratification of an appetite for sturgeon.

Some miles below Sturgeon falls there occurs a very strong rapid, around which there is a portage that requires about one hour to pass it with the ca-

noes and loading. This is called Quiver portage.

Pe-me-ne falls are the next of note below Sturgeon falls. They are called Re-me-ne, (elbow,) from there being a crook in the shape of an elbow in the iver just below. The total fall here is only eight and eighty-four hundredths in an extent of eight hundred and thirty-three feet, exclusive of the short rapid immediately above the principal chute. The least width of the passage for the water is fifty feet. It is believed that, in times of extreme high water, a canoe may be passed down the chute without destruction; but there is a portage around the falls. This is the lowest portage on the Menomonee, except that at Kitson's trading-post, where an extreme bend in the river is usually avoided by making a short portage across the neck of the peninsula.

At the proper seasons, the Sturgeon and Pe-me-ne districts are much frequented by the Indians for spearing sturgeon, trapping marten, and shoot-

ing the deer.

At the head of Pe-me-ne falls, a few rods north of the portage road, where it leads down to the upper basin of the lower chute, the variation of the magnetic needle was determined by means of the pole-star, and found as follows:

Variation, 5° 56' east, at 11 o'clock, A. M., 25th September, 1840; temperature, 84° Fahrenheit. Temperature at noon of same, 90°; at 1, P. M., 96°; at 3, P. M., 88½°; and for several days preceding and succeeding 25th September, 1840, the mercury ranged high.

Between the Pe-me-ne falls and the mouth of the Menomonee, there are many rapids, the principal of which are: 1st. White rapids, where the highest trading-post upon the river is situated. 2d. Grand rapids, where for two miles the water is shoal, and passes over a smooth rocky bottom of flat stone. 3d. Chappeau's rapids, where white fish are caught in great quantities. Here is a well 1...own old trading-post, called Chappeau's. 4th. Menomonee rapids, where there is a dam and a saw-mill, also a trading establishment of some note. All these rapids are difficult of ascent or descent with canoes; but notwithstanding, with much skill and great exertion, the canoemen succeed in urging up the canoe, even with considerable loading in them, by means of their long poles.

Of the Menomonee river in general, it may be said that it is not navigable for any craft except canoes, owing to difficult rapids, shoals, and falls. There are no less than eight portages, varying in length from one-eighth to one and a half mile, where all the loading, and canoes besides, have to be carried over upon the backs of the party. The ascent of this river, with canoes containing not more than three hundred pounds, is a task of incessant toil and danger; and, under the most favorable circumstances, requires fourteen days, from its mouth to the entrance of the Pesh-e-cum-me, with a party. The time of descending through the same extent, with canoes

lightly loaded, is four days.

The ascent of the Brulé, or We-sa-co-ta, is still more difficult and vexatious, owing to the shallowness of the water. It requires about six days, at high stages of water, to ascend from its mouth into Lac Brulé; in times of low water, it is useless to attempt the ascent. The time of descending from Lac Brulé to the entrance into the Menomonee, is three days and a

half, with light loads and high water.

None but the most skilful canoemen should be employed for this kind of navigation. Each canoe requires two men—one in the bow, and one in the stern. Indians are the best hands that can be employed, so far as skill is requisite, but it is difficult to engage them for a long trip. French voyageurs are the next best class; they can be engaged for almost any length of time, and are by far the best trained for the endurance of the extreme hardships attending a trip like that which our party performed from Green bay to Lac Vieux Desert and back.

The banks of the Menomonee river, as well as its islands, from its mouth as far up as the Big Quin-ne-sec falls, are covered with an excellent growth of white and yellow pine timber, which, in process of time, must become

valuable.

The bed of the river throughout is exceedingly rocky, and its banks in many places, particularly at the falls and principal rapids, consist chiefly of

rock (iron stone.)

The stream does not overflow its banks, which are generally quite bold. The valley of the Menomonee contains much good land, and is, in the main, much better than is generally supposed.

I have the honor, &c.,

THOS. J. CRAM, Captain Topographical Engineers.

December, 1840.

To J. J. ABERT, Col. Corps Topograph. Eng., Washington.









