

BEFORE THE INDIAN CLAIMS COMMISSION

THE MINNESOTA CHIPPEWA TRIBE, ET AL.,)	
ON BEHALF OF THE CHIPPEWAS OF)	
LAKE SUPERIOR,)	
)	
Plaintiffs,)	
)	Docket No. 18-U
v.)	
)	
THE UNITED STATES OF AMERICA,)	
)	
Defendant.)	

Decided: March 24, 1971

ADDITIONAL FINDINGS OF FACT

The Commission makes the following findings of fact which are supplemental to the findings numbered 1 through 10, previously entered herein, 14 Ind. Cl. Comm. 360 (1964).

11. The land to be valued is identified as Royce Area 332 and is described in the Commission's Finding No. 2, 14 Ind. Cl. Comm. 360, 362 (1964). The date of valuation is January 10, 1855, the date the treaty of cession (10 Stat. 1109) was ratified.

The subject land is a triangular shaped area located in the north-east corner of the State of Minnesota. In 1855 Area 332 was known as the Arrowhead region and was in what was then known as Minnesota Territory. It was originally a glacial region and because of that the soil was rocky.

The apex of the triangle is at the Pigeon River on the international line. The Canadian border forms the northern leg. The eastern side fronts on Lake Superior for about 140 miles from the Canadian border to the head of Lake Superior at Duluth. The western side is on the line of the Vermillion, East Swan and St. Louis Rivers. The area included all

of two present day counties, Cook and Lake, and parts of four others, St. Louis (about 2/3), Carlton (about 90%), Pine and Aitkin (small portions).

Area 332 includes the most rugged part of Minnesota. In it are the lowest and the highest elevations in the state. The lowest point is the Lake Superior shore and the high point is 2230 feet above sea level in the Misquah Hills, Cook County. About three to six miles back from Lake Superior and about 600 to 900 feet above the Lake is the Sawtooth Mountain range. It is in Cook County, the easternmost county in Area 332.

An average of about 70 inches of snow falls in Area 332. Frost begins in parts of the area from early September and continues to about mid-May. These conditions prevailed at the time of the cession. In 1855 winter ice closed the Great Lakes to shipping from approximately mid-December to April. However, the temperature in the vicinity of Duluth was more moderate because of the tempering effect of Lake Superior. Approximately 60% of Area 332 drained into Lake Superior. Approximately 10% lay in the Mississippi River drainage area.

12. The subject area was known to Europeans 200 years before the valuation date of January 10, 1855. The French were the first Europeans to enter Minnesota. Commencing in the 1640's, they came by way of Lake Superior as explorers, traders, voyagers and missionaries. The French developed the fur trade and searched for minerals, particularly copper. In 1678-79, Duluth, the French trader and explorer, made trips

along the north shore of Lake Superior to Thunder Bay (near the Canadian border). In 1680 he found the route between Lake Superior and the Mississippi River Valley.

The French controlled the Lake Superior region and the Upper Mississippi Valley until the close of the French and Indian wars in 1763, when the subject lands passed to British sovereignty upon the cession to the English of all of France's possessions in North America east of the Mississippi, except for New Orleans.

During British dominion over Minnesota East (east of the Mississippi) no attempt at new settlement was made. The British emphasized fur trade with the Indians, and, primarily through the Northwest Company, operated a chain of trading stations which served as major distributing and collection posts. The trading operations extended through Area 332 and deep into central Minnesota. Although British sovereignty over Minnesota East terminated in 1783 (8 Stat. 80), the British remained in control and continued their fur trading until about 1816.

In 1787, Minnesota East was made part of the Northwest Territory. The limits of the Northwest Territory were diminished as States carved from the Territory were admitted into the Union. Minnesota East successively became part of Indiana Territory (1800-1809), Illinois Territory (1809-1818), Michigan Territory (1818-1836) and Wisconsin Territory (1836-1848). The Territory of Minnesota, including that portion of both Dakotas east of the Missouri River, was established in

1849. Minnesota was admitted as a state in 1858.

13. In the mid-1850's, due to railroad connections, the midwest prairies were being settled at a speedy rate. At the time of the 1854 Treaty, the population of the subject land consisted of the Chippewa Indians and the halfbreeds and traders associated with them. At the time of the cession in this suit the Chippewa population of Minnesota numbered about 8,000. The growth of white population in Minnesota was as follows:

1849	4,852
1850	6,077
1854	32,000
1855	40,000
1856	100,000
1857	150,000
1860	172,123
1865	250,099
1870	439,706
1875	597,407
1880	780,773

The first settlements in the subject area extended from the St. Louis River along the north shore of Lake Superior to the Pigeon River on the Canadian border. Even before public land offices were opened, a number of townsites were entered under the townsite laws. In April 1856, the first land office in the subject area opened in what is now Duluth. Surveys were underway in that year. Before the end of the year, 14 plats of townsites, the majority within the present limits of Duluth, were filed of record, followed by 8 more in 1857. Within two and one-half years, 23 townsites were platted and filed. These included a number of townsites located along the north shore of

Lake Superior where the first settlements were located.

As late as 1870, four-fifths of the population in Minnesota was concentrated in the southeastern part of the state. However, although the population in Area 332 did not mushroom, the growth of the population to the south of the Area did help to provide a lumber market for the white pine timber from the southwest part of Area 332. Additionally, population in a forested area is not as indicative of the value of timberland as may be the situation where land is used primarily for agricultural purposes.

14. The earliest transportation in the subject area was by birch bark canoe. It was light, and could be carried as well as paddled. The subject area was filled with inter-connected rivers, lakes and lake chains which initially were used by explorers, trappers and hunters. Area 332 was, in fact, the source of three major watersheds which provided market accessibility. One was across the north portion, the Hudsons Bay complex flowing along the Canadian border embracing the Rainy River basin. The second was the one oriented toward Lake Superior, finding ultimate outlet through the St. Louis River or Lake ports along the Great Lakes. The third was toward the south and the Mississippi River via the St. Louis River.

The Rainy River system on the international line (Rainy Lake, Rainy Lake River, Big Fork, Little Fork and Vermillion Rivers) served as a waterway for timber cut from the area in suit for the potential Canadian market. The system was navigable for 300 miles. From Duluth to Manitoba, the route followed the north shore of Lake Superior to

Grand Portage, which is in the subject area, then connected with the Rainy River system to the west. This route was used until the Canadian Pacific Railway was built.

The St. Louis River and its tributaries in northeastern Minnesota formed part of an extensive waterway connecting with the Atlantic Ocean and eastern markets via the Great Lakes and the St. Lawrence River.

From the Mississippi River to Lake Superior there were two routes, one by way of the Savanna portage and the St. Louis River, the second, through Wisconsin via the St. Croix and Brois Brule Rivers. From the Mississippi to the Rainy River system, the route was from Lake Winnibigoshish via Big Fork River and a portage.

The Welland Canal was completed in 1824 providing a connection with the St. Lawrence River. In 1825 the Erie Canal was completed and linked the Great Lakes with the Hudson River. The first steamboat reached Detroit in 1818 and Chicago in 1832. In 1833 the Ohio Canal connected Lake Erie with the Ohio River. In 1848, the Illinois and Michigan Canal connected Lake Michigan to the Illinois and Mississippi Rivers.

Commerce on Lake Superior was given a tremendous boost by the opening of the Sault Saint Marie Canal connecting Lake Superior with the rest of the Great Lakes. Prior to the construction of this canal it took six days to go to Duluth. The Sault Saint Marie Canal was first surveyed in 1837. In 1852 Congress granted 750,000 acres of public land for its construction. It was under construction when the 1854 Treaty was negotiated and was completed in June 1855. It opened

Lake Superior to the Atlantic seaboard via Buffalo, New York. It is apparent that an investor, in 1855, would have believed that in the not too distant future there would be access to northeastern Minnesota via the Sault Saint Marie locks and eventually via railroads.

15. In 1855 there were no railroads in Minnesota but railroads were planned and anticipated. At that time it was known that Minnesota and the head of Lake Superior would be connected with lines already at the Mississippi. Between 1853 and 1857, the Minnesota territorial legislature chartered 27 railroad companies. In 1857 Congress granted Minnesota 4,500,000 acres of land to aid in the construction of railroads in Minnesota over routes specified in a general way. These routes provided a primary system of transportation across the southern half of the state and northwesterly to the head of navigation on the Red River. In 1858 the Minnesota legislature granted a \$5 million loan to aid railroad construction.

The Great Northern Railroad was chartered by Minnesota in 1856 and by Congress in 1863. In 1870 the railroad was completed from St. Paul to Duluth connecting the Mississippi River and the Great Lakes. In 1871 the Northern Pacific, extending from Duluth to Puget Sound, Washington was completed to the west line of Minnesota at Moorhead on the Red River. It reached the west coast in 1883.

There were no logging railroads in Minnesota in 1855 and only one prior to 1892.

16. On the valuation date there were only Indian trails in the subject area. There was an incomplete road going in a northeasterly

direction from Point Douglas at the mouth of the St. Croix River up to Superior in Wisconsin. Even as late as 1882 when the government offered for public auction townships of land in some of the counties in Area 332, the country was difficult to reach. There was not a road through the woods over which a loaded team could be driven from Duluth to Lake Vermillion. From Lake Vermillion one could go either east or west by using canals and making portages from lake to lake. Dog trains were also used.

Logs were moved from the woods by dragging or sleigh hauling them to the rivers and lakes and driving them or rafting them to mills. In the south, the Midway, the Kettle, the Nemadji, the St. Louis and the Cloquet were good log driving streams. In the north some rivers used for driving logs were the Pigeon, the Poplar, the Cross and to some extent the Knife and the Beaver Rivers.

17. Reports concerning the presence of copper and iron in the Lake Superior region were available intermittently in the 1600's and the 1700's. The first report of iron in the area in suit was made by the French explorer, La Verendrye, in the 1730's. Although neither the French nor the later British colonists conducted successful mining ventures, it was known that there were mineral deposits on the south shore of Lake Superior. The United States obtained control of the minerals on the south shore in the treaty with the Lake Superior Chippewas, Treaty of August 5, 1826, 7 Stat. 290. (Finding 4, 14 Ind. Cl. Comm. 360, 363).

During the course of negotiations leading to the Webster-Ashburton

Treaty of 1842 (8 Stat. 572), there was awareness that the northern portion of Minnesota was a mineral region. President Tyler, in 1842, advised the Senate that land within Area 332 was considered valuable as a mineral region. In 1849, in a message to the territorial legislature, the Governor of the Minnesota Territory referred to the deposits of copper and iron on lands adjacent to Lake Superior. In 1853, in another message, the Governor reiterated the view that there were rich ores on the northern shore of Lake Superior as well as on the southern shore. One historian characterized the cession of September 30, 1854, which ceded the subject triangle north of Lake Superior, as a miners' proposition.

While it was some years after the valuation date, in the mid-1860's the Vermilion Lake area began to be accepted as rich in iron ore.

18. The Commission finds that Area 332 contained 5,867,435.81 acres.

Mr. John William Trygg, a professional forester and appraiser, was the plaintiffs' expert witness. He computed the total acreage at 5,867,435.81, based on his review of plats of the public land survey made of the area and reported by the public land surveyor. The surveys for the first townships started in about 1857 and they went on to about 1911. Approximately three million acres were surveyed between 1870 and 1885.

Mr. Trygg divided the total acreage into two general categories, water acreage and land acreage. The "land" acreage was classified as upland (including forested areas), marsh (grassland or meadows) bottom land and swamp (land unsuitable for cultivation, a former glacial lake filled with growth of hedges, mosses, spruce, cedar and tamarack). The

water acreage amounted to 343,604.19. The land acreage amounted to 5,523,831.62 subdivided as follows:

Upland	4,463,435.62	acres
Marsh	12,000.00	"
Bottom	22,960.00	"
Swamp	1,025,436.00	"

One of the defendant's experts, Mr. Dewey Newcombe, concluded that the total acreage amounted to 5,819,360 for a difference between the parties of only 48,075.81 acres. However, the breakdown of the total shows more diversity. Mr. Newcombe concluded that the water acreage amounted to 408,910 or 65,305.81 more water acreage than plaintiffs' expert found. Defendant contended that 2,370,839 acres were swampland. Thus defendant has asserted that there were only 3,039,611 acres of upland (forested area).

The Commission has accepted the total acreage as calculated by the plaintiffs' expert, which was based on data provided by public land surveyors. We also find that their integral figures for the specific categories of acreage are acceptable as coming from official land office records which were maintained closer in time to the date of the cession.

19. Area 332 was not generally suitable for agriculture since the soil was light and underlaid with stone. Some of the land might have supported subsistence farming in Carlton County and along the north shore of Lake Superior. The highest and best use of the area was for lumbering operations. At the time of the cession it was known that there were extensive virgin forests in Area 332. The area consisted of a vari-

of species of timber including spruce, fir, aspen, cedar, tamarack, balsam and jack pine (also known as black pine). White pine and Norway pine (also known as red or yellow pine) were the prevalent species. In 1855 white pine was the species preferred and considered the most valuable of the woods for commercial purposes. White pine is a softer wood and grows in loam soil. It is easier to drive than Norway pine which is heavier and denser. However, Norway pine grows faster than white pine, is more fire resistant and was considered better for use as structural timber.

Cloquet, Minnesota, was known as the home of the white pine. Carlton County was more heavily timbered with pine than any other county in Minnesota. Generally the white pine found in the southern part of Area 332 was better; Norway pine was more abundant in the northern part of Area 332. Cook County had pine classed as poor in quality because of the soil.

The circular saw had been in use in timber cutting for approximately five years by 1855. It was capable of cutting about 1000 feet of timber per hour. Small sawmills were established in 1855 in Duluth and along the north shore of Lake Superior. In 1856 there were sawmills at Beaver Bay and in 1857 at Two Harbors. The early mills were limited in their capacity but by 1869 the timber demands had expanded substantially and so the sawmills at Duluth increased in both number and production.

The timber on the north shore was logged into Lake Superior. Logging generally could be conducted economically if the cutting took place up to approximately four miles from a drivable stream.

20. Plaintiffs' expert appraiser, Mr. Trygg, concluded that in 1855, Area 332 contained 3,174,056 acres of pineland. On these acres

were a total of 16,887,580 board feet of merchantable pine, or an average of about 5,320 board feet per acre of pine land. Merchantable pine trees were defined by Mr. Trygg as those which would produce saw timber, i.e., trees 8 inches or more in diameter measured at breast height. Merchantable was not synonymous with marketable. For a tree to be marketable meant it had to be accessible to a good drivable stream.

He did not break down the total to show how many board feet were white pine and how many were Norway pine. However, he did conclude that white pine predominated in the subject area with about 85% white and 15% Norway.

Two of the defendant's experts, Mr. J. C. Long and Mr. Hugo L. Sundling, both lumbermen and foresters, determined that in 1855, there were in Area 332, 2,495,000 acres of commercial pineland with a volume of 6,159,730,000 board feet of white pine and 1,240,270,000 board feet of Norway pine for a total of 7,400,000,000 board feet of pine. (There were only approximately 80 acres of cork pine growing in Area 332. Cork pine is straight grain white pine.) The difference between the parties is 679,056 total pine acreage and 9,487,580,300 board feet of pine. The percentage breakdown as between white and Norway pine is comparatively the same with Mr. Long and Mr. Sundling estimating that white pine constituted 83% of the total and Norway 17%.

The public land surveyor's notes did not contain figures showing board footage or volume of timber. They gave information on species, diameter, location of trees and order of prevalence of species. There

were no records kept or actual counts made by cruisers of the pine volume in Area 332 in 1855. In 1896 the Chief Fire Warden for Minnesota reported an estimate by counties of the quantity of white and Norway pine standing in Area 332. As of 1896 he reported 8,957,500,000 feet of white and Norway pine on the subject lands. In the 1890's timber was cut down to a 6 inch top end diameter, a harvesting procedure not applicable in 1855.

The difference between the experts for the parties results from their varying methods of using source materials and making calculations. Mr. Trygg applied the International 1/4-inch Log Rule as compared to the Scribner Log Rule for measuring timber used by defendant's experts; plaintiffs' expert assumed that, in 1855, trees were harvested to a diameter of 8 inches breast high and a top end diameter of 6 inches whereas Mr. Long and Mr. Sundling estimated board feet on the basis of cutting pine trees with a breast high diameter of 12 inches and a minimum top end diameter of 10 inches; plaintiffs' expert classified as pineland any of Area 332 which bore 200 board feet or more of white or Norway pine to the acre; he also classified as pineland areas which defendant's experts disputed based on excerpts from the descriptions of townships in the surveyors' notes.

Mr. Sundling excluded pinelands containing less than an average of 4,000 board feet per acre of pine. He also excluded as pineland areas where the public land surveyor did not rank pine as the prevailing or near prevailing species. Order of prevalence meant, to a

surveyor, prevalence of a species of timber rather than volume of timber in the species.

Mr. Trygg accepted the public land surveyors' field notes and descriptions. The earliest survey was done in 1857 with a large portion of the surveys having been done 15 years after the date of cession. Tree growth occurred in the interim. The defendant's experts took the data in the surveyors' notes and applied tree growth tables to project back to obtain their estimates of the diameters of the trees and the board footage in Area 332 as of 1855.

Plaintiffs' expert used a combination of the board footage in bearing trees and line trees in Area 332 to arrive at his estimates. Bearing trees were the trees used to mark the corners of sections by the public land surveyors. For section corners there were four bearing trees. Two bearing trees were required for each 1/4 section between section corners. Bearing trees were located anywhere from 5 feet to 300 feet from a corner, but on an average they were about 30 to 50 feet from the survey corner. All species were utilized by surveyors as bearing trees and usually they were the younger trees because a survey mark would last longer and they were easier to blaze.

Line trees were trees which grew on the line extending from one survey corner to another. These trees were not selected by a surveyor, they were just physically present on the line. The surveyor measured the diameter of the line tree but not the height. No heights for any trees were recorded during survey nor were notes made as to where on a tree the diameter measurements were taken.

Mr. Trygg did not characterize any land as pineland unless the surveyors' field notes stated that the line trees were white or Norway pine. Using the International Table he calculated the board footage of the bearing trees and the line trees. Since he felt the line trees represented more of a cross section of trees in the forest and the average size of the trees, he increased the volume of the bearing trees by 15% to reflect the larger size of line trees.

He divided Area 332 into nine harvest areas in order to reflect general interval uniformity as to soil and growth patterns. Within these harvest areas he set up sample plats in land he had established as pineland. By multiplying the volumes of trees within the plats he arrived at his total volume of board footage in Area 332.

21. Mr. Trygg considered stumpage in estimating the fair market value of Area 332 in 1855.

Stumpage represents the mill price of the lumber less all costs of cutting, transportation, processing and a fair profit, or the price paid for the log less all costs of cutting and delivery to the mill. Stumpage prices of white and Norway pine in Minnesota were estimated at 50¢ per thousand feet in 1850 and 60¢ in 1860. In 1866 the average price of pine stumpage on the subject land in Carlton County was \$4.50 per thousand board feet. Plaintiffs' expert estimated that the fair market stumpage value of white and Norway merchantable pine in 1855 was approximately 50¢ a thousand board feet. With 16,887,580,300

board feet his value for stumpage in Area 332 in 1855 was \$8,443,790.15.

The Commission finds that as of 1855, standing timber was bought and sold by the acre as timberland and not as stumpage, and therefore the value of Area 332 will not be determined in accordance with stumpage prices.

22. Mr. Dewey Newcombe, the defendant's appraiser, concluded that as of January 10, 1855, the estimated market value of the subject area was 15¢ per acre, rounded off to \$875,000 for the 5,819,360 acres he estimated to be in the subject area.

The valuation was based on the present (1855) value of \$1.44 per acre returnable in 20 years (1875), using an interest factor of 12% compounded annually. The \$1.44 represented what he assumed an 1855 buyer might expect to receive for the land in 1875.

This expert regarded the highest and best use of the subject land "to be for holding as an investment until *** market demand made logging economically feasible *** then to liquidate the investment by reselling the land in acreage parcels to lumbermen ***." He assumed that 18% of the land was non-saleable, being swamp, water, rough terrain or land donated for roads and schools, and that the cost of management and disposition would be \$0.10 per acre. His valuation formula made no provision for the return of any part of the investment to the hypothetical buyer by sales of land or timber, or by income derived from the land during the 20-year waiting period, although he recognized there was a potential for resale and income during that period. He

