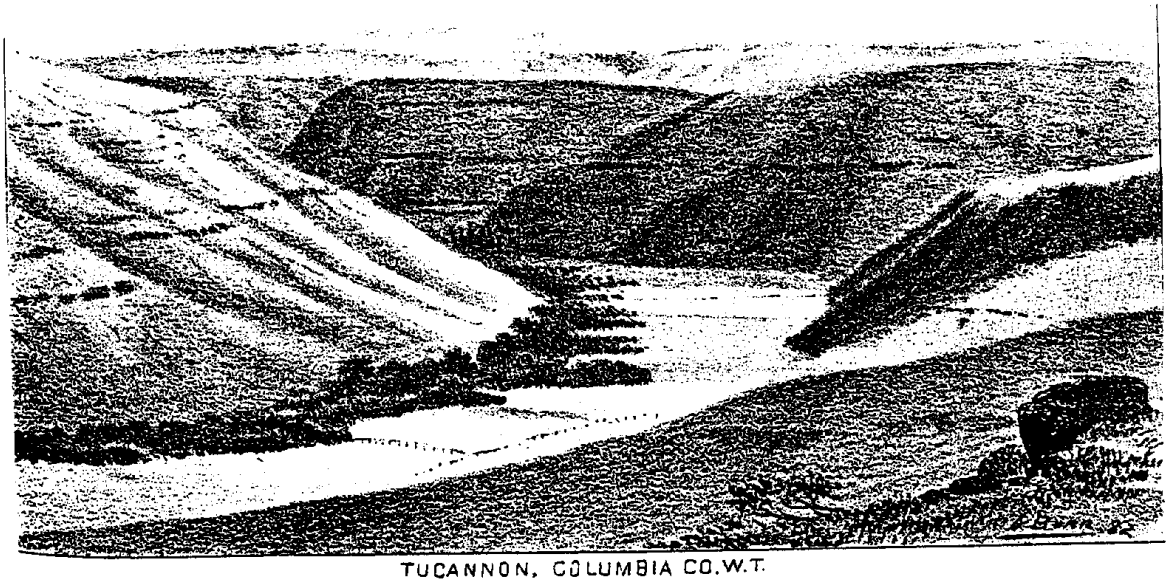
TUCANNON RIVER, WASHINGTON:

RIVER WIDTHS, VEGETATIVE ENVIRONMENT, AND CONDITIONS

SHAPING ITS CONDITION, MOUTH TO HEADWATERS



TUCANNON, COLUMBIA CO.W.T.

(Gilbert 1882:facing p. 418)

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Submitted to

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Preface

The following report was prepared by University scientists through cooperative agreement, project science staff, or contractors as part of the ongoing efforts of the Interior Columbia Basin Ecosystem Management Project, co-managed by the U.S. Forest Service and the Bureau of Land Management. It was prepared for the express purpose of compiling information, reviewing available literature, researching topics related to ecosystems within the Interior Columbia Basin, or exploring relationships among biophysical and economic/social resources.

This report has been reviewed by agency scientists as part of the ongoing ecosystem project. The report may be cited within the primary products produced by the project or it may have served its purposes by furthering our understanding of complex resource issues within the Basin. This report may become the basis for scientific journal articles or technical reports by the USDA Forest Service or USDI Bureau of Land Management. The attached report has not been through all the steps appropriate to final publishing as either a scientific journal article or a technical report.

INTRODUCTION

This study was mounted for the Eastside Ecosystem Management Project. The assignment was to examine historical documentation about the appearance of and uses of the watershed of the Tucannon River from its confluence with the Snake to its headwaters in the Blue Mountains. This stream lies in southeastern Washington and flows from the forested slopes and canyons of the Blues northwesterly through the rolling, arid, and largely treeless Columbia Plateau.

The study area was bisected by the Nez Perce Indian trail which led from the mouth of the Clearwater westward to the watershed of the Walla Walla River. In the nineteenth century explorers such as Lewis & Clark, missionaries, gold miners, freighters, and eventually settlers all used this route. The trace slowly changed from trail to road and in the 1870s gave rise to scattered communities in the Tucannon region.

The historical evidence confirms that while the bottoms along the Tucannon are narrow and the surrounding countryside of the Plateau is arid, the primary margins of the river were heavily covered with vegetation. Particularly useful in confirming this condition are the notes of the cadastral surveyors who subdivided the townships bisected by the river between 1864 and 1912. The inclusion of the forested slopes of the Blue Mountains in the Wenaha National Forest early the twentieth century for a time extended protection to the region from logging. Subsequent to World War II, however, portions of the watershed came under intensive harvest, while other areas were set aside as the Tucannon-Wenaha Wilderness.

Agriculture has been engaged in for nearly 130 years in the Tucannon country. The impacts of erosion as the result of farming and livestock grazing have undoubtedly affected the river. The removal of vegetation along the stream corridor and its tributaries have also contributed to changing river conditions.

ACKNOWLEDGMENTS

I would like to thank Pat Pickens and the staff of the BLM Oregon State Office Public Room for their patient and efficient production of plats of survey and microfiche copies of cadastral field notes. Without that basic data this study would not have been possible.

I also thank Stefan and Ethan Aumack whose good eyes and skills in reading manuscript field notes made possible the development of typescripts of the earliest records documenting conditions along the Tucannon River in the latter half of the nineteenth century.

I am also appreciative of the resources of the Watzek Library and the Boley Law Library, Lewis & Clark College, the Oregon Historical Society Library, and the Millar Library of Portland State University. From these institutions I drew upon primary and secondary sources to assess the historical and cartographic developments in the project area.

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Francis F. Loehr, T10N, R41E, W.M., on the Tucannon River, October, 1872

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HISTORICAL OVERVIEW

Exploration and Early Settlement, 1805-1880

The Tucannon River lay distant from the routes of primary travel of overland explorers, fur trappers, and emigrants in the nineteenth century. A tributary flowing northwesterly toward the Snake River out of the northern flanks of the Blue Mountains in southeastern Washington, this stream possessed a remote setting which did not lead to its extensive discussion in either travel literature or history. The river, however, lay athwart the primary trail from the Walla Walla drainage on the west to the mouth of the Clearwater to the east. Many who traveled back and forth across the eastern Columbia Plateau to the Clearwater country thus entered the Tucannon watershed and most traveled along Pataha Creek, an important tributary.

The Tucannon was variously identified in the historical literature. To the Lewis & Clark party it was Ki-moo-e-nimm Creek. In the 1830s and the 1840s the protestant missionaries working in the region under the American Board of Commissioners for Foreign Missions referred to it as the Tusha or the Tukanan River. Subsequently it became commonly known as the Tucannon.

The earliest mention of the Tucannon River came at the initial time of Euroamerican penetration of this portion of the homeland of the Nez Perce Indians. On October 13, 1805, the Lewis & Clark expedition, traveling down the Snake by pirogues, passed the mouth of the Tucannon. William Clark noted:

> a windey dark raney morning. The rain commenced before day and continued moderately untill near 12 oClock-- we took our Canoes (over) through This rapid without any injurey. a little below passed through another bad rapid at [*blank*] miles passed the Mo[uth]: of a large Creek [*ML?: at 5 m in the Lard. bend we call Ki-moo-e-nimm Creek] [ML?: 10* Ms.] little river in a Stard. bend, imediately below a long bad rapid (Moulton 1988[5]:268).

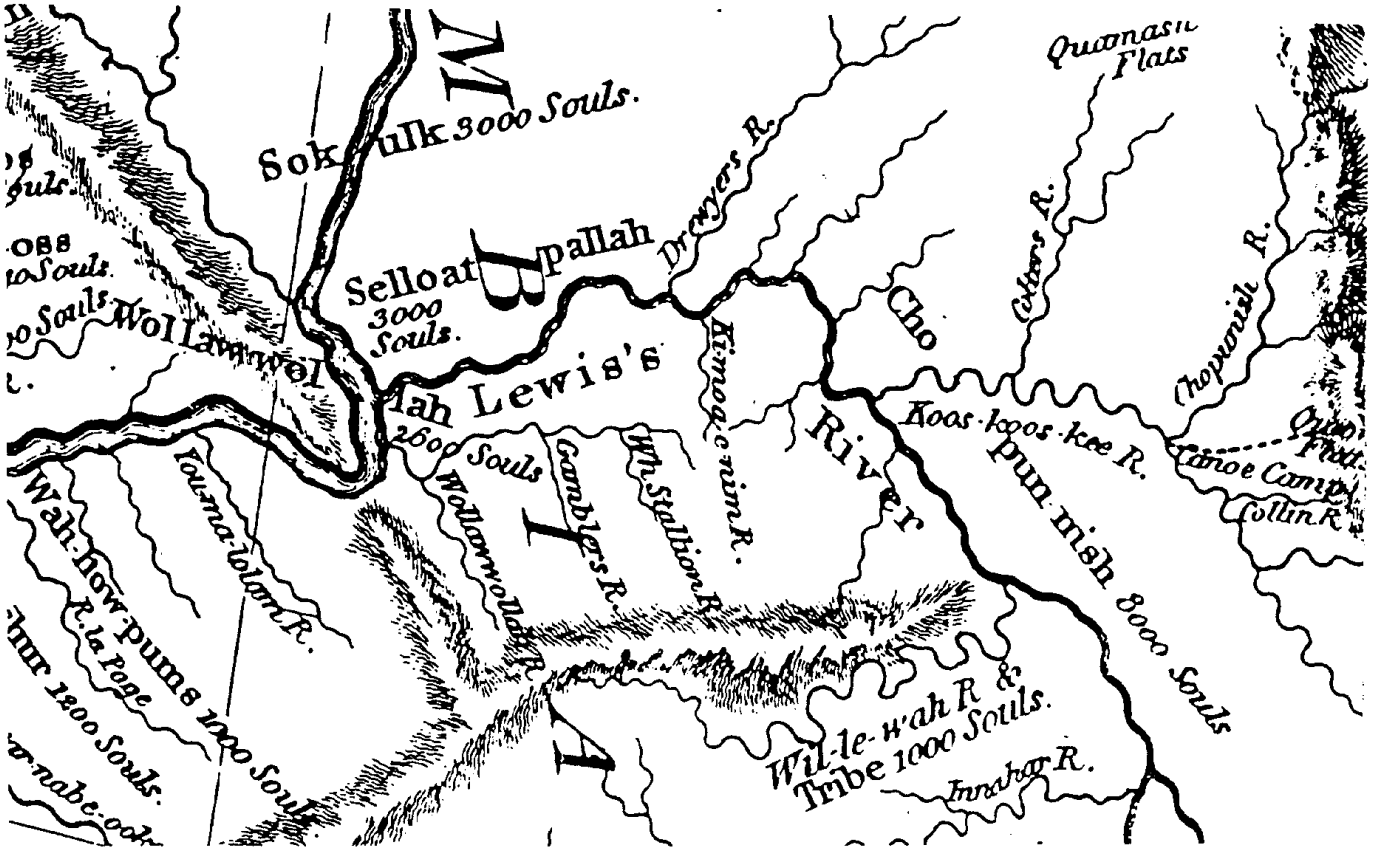

Fig. 1. "Ki-moo-e-nim R[iver]," an early identification of the Tucannon River as a tributary to Lewis's [Snake] River below the mouth of the Koos-koos-kee [Clearwater] River (Clark 1810).

In May, 1806, the Lewis & Clark expedition, eastward bound on horseback from the mouth of the Umatilla River, passed from the Walla Walla drainage to the Touchet River on its way to the confluence of the Clearwater and Snake rivers. Accompanied by three young men of the Walla Walla Tribe, the party on May 3 reached Kimooenem Creek--the Tucannon River. Meriwether Lewis wrote:

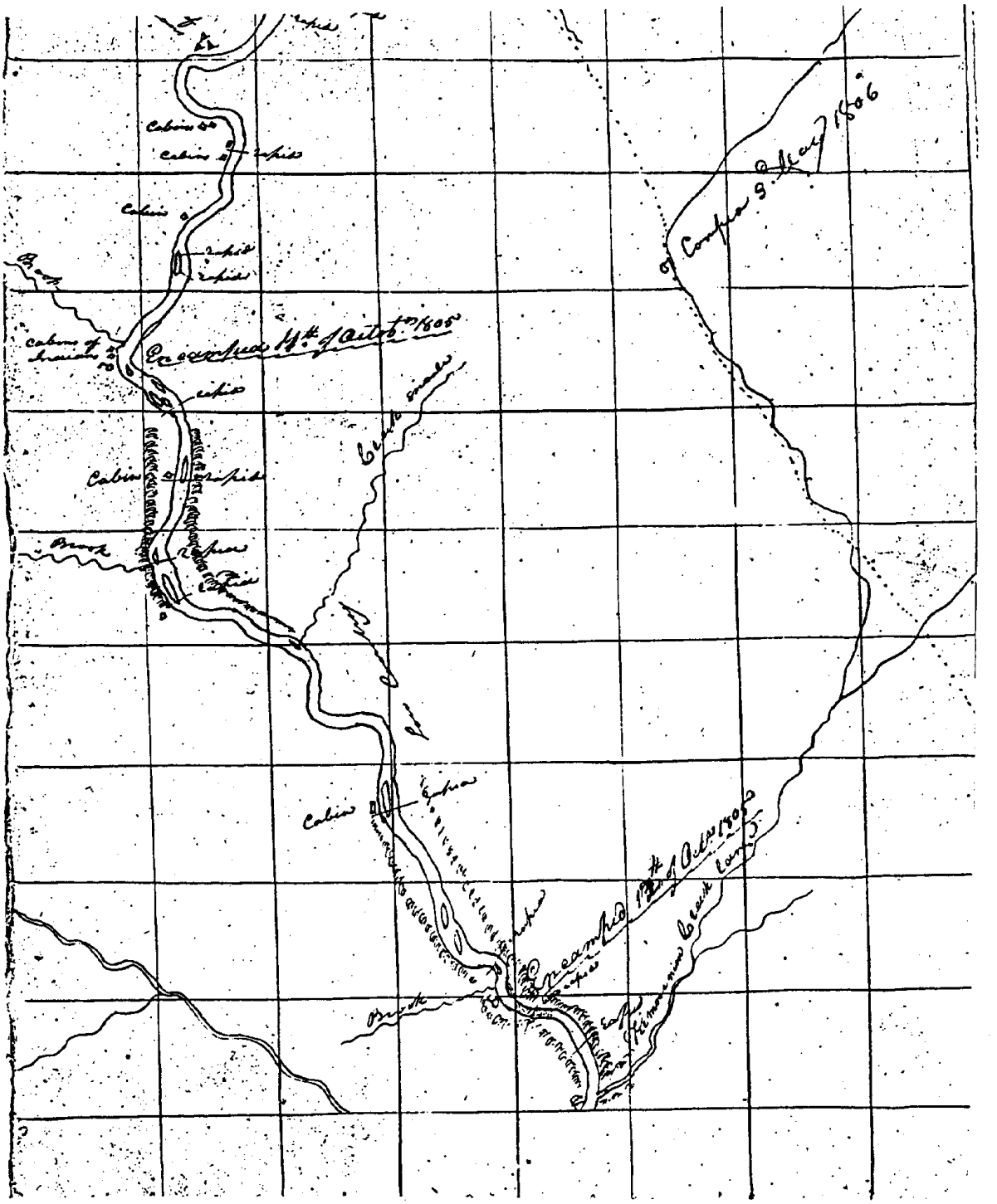

Fig. 2. Route of Lewis & Clark down the Snake River, camp of October 8, 1805, mouth of Ki-moo-e-nim [Tucannon] Creek and dotted line of return route of May 3, 1806, with campsite on Pataha Creek (Moulton 1983[1]:73).

> This morning we set out at 7 A. M. steered N. 25 E 12 ms. to Kimooenem Creek through a high level plain. this creek is about 12 yds wide pebbly bottom low banks and discharges a considerable body of water it heads in the S. W. mountains and discharges itself into Lewis's [Snake] river a few miles above the narrows. the bottoms of this creek are narrow with some timber principally Cottonwood and willow. the under brush such as mentioned on N. East [Touchet or Patit] Creek. the hills are high and abrupt. the land of the plains is much more fertile than below, less sand and covered with taller grass; very little of the aromatic shrubs appear in this part of the plain. we halted and dined at this creek; after which we again proceeded N. 45 E. 3 M. through the high plain to a small creek [Pataha Creek] 5 yds wide branch of the Kimooenem C. this stream falls into the creek some miles below. the hills of this creek like those of the Kimooenem are high it's bottoms narrow and possess but little timber, lands of a good quality, dark rich loam. we continued our rout up this creek, on it's N. side N. 75 E. 7 Ms. the timber increases in quantity the hills continue high. East 4 Ms. up the creek. here we met with We-ark-koomt whom we have usually distinguished by the name of the bighorn Cheif from the circumstance of his always wearing a horn of that animal suspended by a cord to he left arm. he is the 1st Cheif of a large band of the Chopunnish [Nez Perce] nation. he had 10 of his young men with them (Moulton 1991[7]:202).

The observation of Lewis was noteworthy. As this exploring party headed east and entered the Tucannon watershed, he observed the shift in biotic province from the arid, sagebrush-steppe plain of the Columbia Plateau to the steppe region of perennial bunchgrasses. These included bluebunch wheatgrass (*Agropyron spicatum*), Idaho fescue (*Festuca idahoensis*), and Sandberg bluegrass.

On their trip eastward in May, 1806, the Lewis & Clark expedition followed a well-established Indian trail which led via the Walla Walla to the Tucannon. Continuing east via Pataha Creek, this route--today followed by the highway--dropped down Alpowa Grade to the Snake River and, in a few miles, reached the confluence of the Clearwater and Snake rivers at present Clarkston, Washington, and Lewiston, Idaho. The widespread Indian use of this area was noted by surveyor George

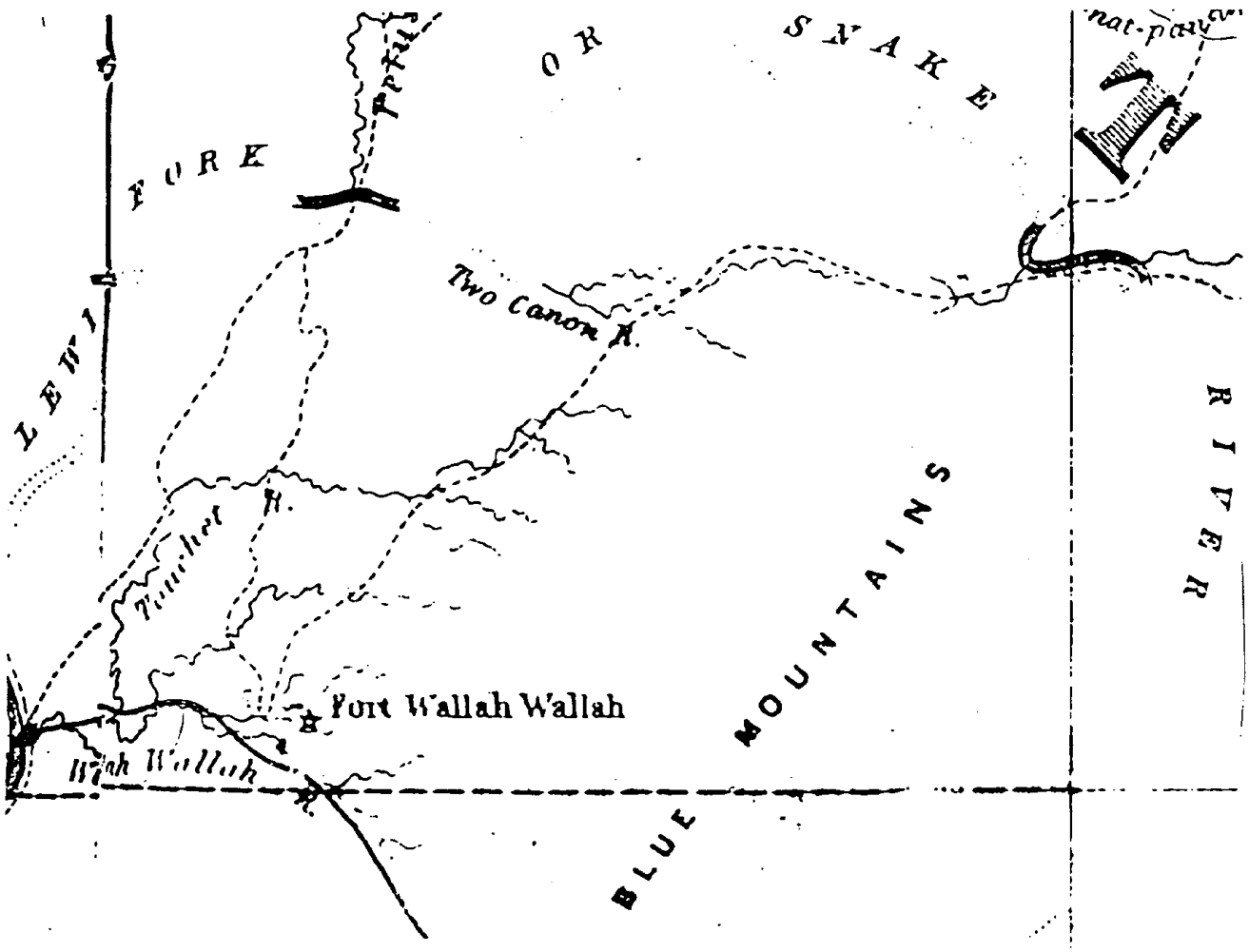

Fig. 3. Route of trail (dotted line) from Fort Walla Walla (U.S. Army) via "Two Canon R[iver]} to Lapwai on the Clearwater River (Anonymous 1859).

House, Jr., when in the summer of 1864 he subdivided T11N, R40E, W.M. He noted the "Lewiston and Walla Walla Road passing through the township and crossing the Tucannon River. He also showed by dotted line the "Nez Perce Trail" passing through the same township but lying south of the wagon road (House 1864c, 1864e).

In October, 1835, Rev. Samuel Parker, traveling with fur trappers, passed through the Salmon River watershed to the Clearwater. He crossed at its mouth to the west bank of the Snake, traveled down its bank, and ascended Alpowa Creek to the Pataha and the watershed of the Tucannon. Parker wrote:

> On the 2nd [of October], we arose early, but were detained some time before all our horses could be found. Set out about eight, and preceeded three hours down the [Snake] river to a place where it takes a northerly bend, through a section of mountains, which are difficult to be passed. Our direct course to Walla Walla being west north-west, we here left the river and followed a small stream [Alpowa Creek] up a valley nearly to its source. The section of country through which we journeyed to-day was considerably mountainous. One part of the river along which we traveled was walled up with volcanic rocks. The lowest part was amygdaloid, about thirty feet high above the river, and very cellular, terminating in a narrow horizontal plain. Above this is superimposed columnar basalt; the columns of which are regular pentagons, varying from two to four feet in diameter, rising sixty feet high, perpendicular excepting in one place, where they were a little inclining. Above this formation of columns there was a stratum of volcanic stones and disintegrated basalt, of some six or eight feet thickness, lying in a confused state. Then upon this another section of basalt and amygdaloid of fifty feet depth, and so on to the height of 300 feet nearly perpendicular. The pentagons are as regularly formed, and have much the same appearance, as those composing the Giant's causeway in Ireland. From the best observations I could make, I was led to conclude that the different sections were raised by widely extended subterranean fires, and at different periods of time. The basalt in this place, and also in almost all other places, which I have yet seen, is of a very dark color, containing augite, or black oxide of iron; and is what some, who have been in this country, have called black rocks.

The following day Parker and his party crossed through the Tucannon watershed. He only noted: "After passing over a somewhat hilly country well covered with grass, we encamped for the night, and for the sabbath, in a fertile vale upon an upper branch of the Walla Walla river. Here we found three lodges of Nez Perces . . ." (Parker 1838:119-120).

The Tucannon served as a retreat for missionaries at Waiilatpu, at least that was the occasion when in January, 1839, Marcus and Narcissa Whitman made a winter camping trip to the region. Mary Richardson Walker noted in her diary: "Mrs. W[hitman] busy preparing to go to the Tukanan" (Drury 1963[2]:142). In March, 1839, Mary and Elkanah Walker left the Whitman Mission on the Walla Walla River and crossed the plateau to the northeast. They camped on the Touchet River and on March 7 reached the Tucannon at Starbuck, Washington. Mary Walker wrote: "A pleasant day. Travelled 20 mls. perhaps. Came to a pleasant encampment. Constructed a small lodge at the mouth of the tent in which we build our fire. All goes pleasantly" (Drury 1963[2]:147). The party descended the Tucannon to the Snake and crossed over to the Palouse country. Walker made no mention of the terrain, vegetation, or condition of the Tucannon River.

In March, 1842, the Walkers set out for a long trip with their children from Spokane to the Whitman Mission. They traveled down the Palouse River, viewed the falls, and crossed the Snake. Mary Walker wrote: "We arrived at & crossed the Tusha" (Drury 1963[2]:230). She camped again on the "Tucia" [Tucannon River] in April, 1844, and yet again on May 7, 1845. In that instance Walker wrote: "Crossed Snake River & encamped on Tusha. Encountered a gale just before we reached camp" (Drury 1963[2]:267, 281).

In 1855 Louis Raboin (1799-1856), a French-Canadian, settled on the Tucannon at the point where the east-west trail crossed the river. The site was subsequently settled and developed at Marengo, Washington. The community probably took its identify from Raboin's nickname, "Maringouin," meaning "the mosquito." In June, 1855, Governor Isaac I. Stevens visited Raboin and wrote:

> In the valley of the Tukannon we found a very experienced and kind hearted mountaineer, Louis Maragne [the "mosquito"], who,

> with his Flathead wife and six children, had gathered about him all the comforts of a home. Maragne left St. Louis in 1831, served some years in the employ of the American Fur Company; then went to the Bitter-root valley, but left in consequence of difficulties with the Blackfeet. He is the owner of some fifty horses and many cattle. His potatoes blossom, and his wheat excellent. He had four acres under cultivation. He succeeded well in raising poultry, of which he had three or four dozen (Gilbert 1882:414).

Raboin and his family fled the Tucannon with the outbreak of hostilities with the Indians in 1855 but returned to his claim and resided there until his death in 1856 (Munnick and Munnick 1989:biographical appendix).

In September, 1856, Dr. John W. Evans, Geologist for Oregon Territory, carried out a general reconnaissance of the eastern portions of the Columbia Plateau. On September 16, following his explorations along the Palouse River, he descended to the Snake and crossed to the south bank. The following day he wrote:

> Started at 8 A.M. Weather cloudy and quite chilly, thermometer 46°. Ascended from small creek on spring in ravine where we had camped, up a slope to the high prairie. A few basaltic rocks projecting from the sides of the ravine. Our course lay up the ravine and over the prairie ridges connecting them for miles to Tu-ka-non River. We crossed four of these ridges on the route nearly of the same elevation. At 11 A.M. struck fork or Tu-ka-non River passed down it for half a mile, then went over high divide about the same elevation or a little higher than the prairies, and descended in the valley of the main Tu-ka-non, the previous stream only a fork. Passed down it for three quarters of a mile, crossed it and ascended high prairie on opposite side. After travelling ten miles over an undulating prairie struck fork of Touchet River proceeded down it two miles and camped at its junction with main river. Distance travelled twenty eight miles (Evans 1856: 38-39).

In 1858 the lower Tucannon became part of the theater of operations during the conflicts between the U.S. Army and the Spokane, Coeur d'Alene and Yakima Indians. On August 7, Captain E. D. Keyes departed from Fort Walla Walla for the mouth of the Tucannon where he

was ordered by Colonel Steptoe to construct Fort Taylor. Keyes and his men selected a site at the upstream or eastern side of the mouth of the Tucannon and there felled trees to build their fort deep in the gorge beneath the overhanging basalt cliffs. He named the post in honor of Capt. O. H. P. Taylor who had died on combat on May 17, 1858. Keyes laid out a military reservation of 640 acres and secured a large, flatboat to serve as a ferry. With the conclusion of the campaigns against the Indians, Col. George Wright ordered the abandoning of Fort Taylor on October 1, 1858 (Bancroft 1888:184, 195). Even though unoccupied by the U.S. Army for fifteen years, Fort Taylor appeared on the plat of survey for T12N, R37E, W.M. (Loch and Knowlton 1873a).

With the discovery of gold in the Clearwater watershed in 1861-62, freighters and stage drivers opened regular connections between Walla Walla and the boom towns of Pierce City, Oro Fino, and Lewiston. Settlers in 1862 selected sites along the wagon road where it passed through the Tucannon region, especially along Pataha Creek. Writing twenty years later, Frank T. Gilbert observed:

> The land in that region was used and considered only good for grazing purposes for many years, until 1870, when a few persons on Alpowa ridge and Pataha prairie raised crops of grain that soon drew many to locate farms in those fertile tracts. Settlement in other portions of the [Garfield] county was slow, owing to the fact that lands nearer the Columbia were not all taken yet. At the time Columbia county, including this region, was formed in 1875, there were, probably, less than 200 settlements in the section now forming Garfield county, and a total population of not more than 500 souls. No town existed and no attempt to build one had been made, other than the establishment of a post-office on the Pataha for the accommodation of those living along that stream. The next few years witnessed a great change. The Pataha prairie and Alpowa ridge filled up with settlers, the rich lands along Deadman were taken, and emigrants poured into and located upon a large proportion of the rich agricultural soil of the county, though much excellent land yet invites the immigrant to make a home upon it. Columbia Center appeared in 1876, Pomeroy, Pataha City and Assotin City in 1878, and a number of points for the shipment of

grain were established along Snake river (Gilbert 1882:418).

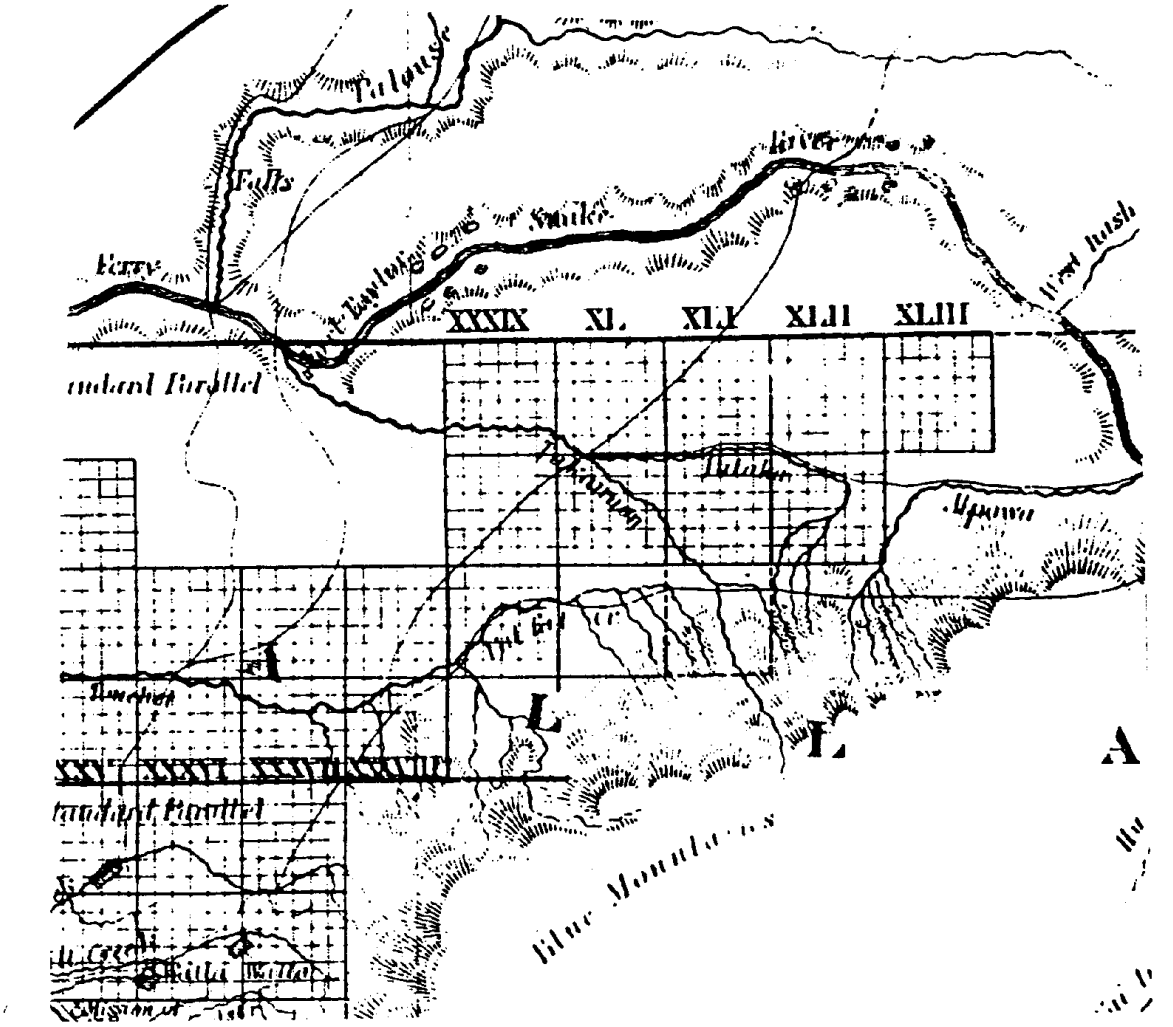

Fig. 4. Status of cadastral surveys in the Tucannon and Pataha watersheds in the 1860s (Giddings 1865).

The main stem of the Tucannon also drew settlers. Marengo, Washington, emerged at the river crossing of the Dayton-Pomeroy stage road. Although Louis Raboin the initial settler was deceased, Marengo developed on the lands of J. M. Silcott who in 1876 donated twenty acres for a town and ten acres for a mill site. Sewall Truax surveyed the town and in May, 1876, A. C. Short erected a store. In July an election

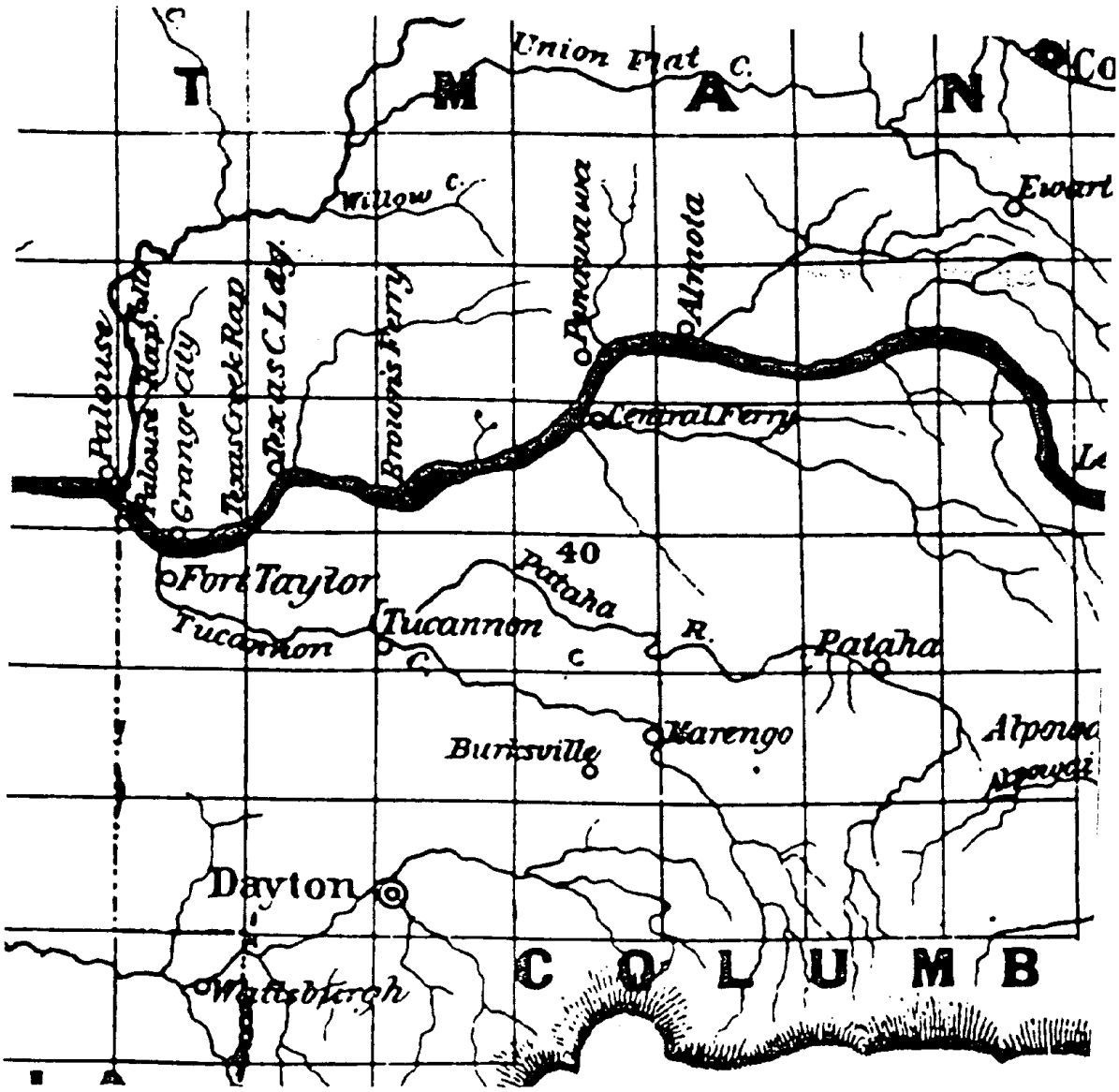

Fig. 5. Settlements in the Tucannon watershed in the 1870s (Anonymous 1878).

selected Pomeroy as county seat. Marengo, shaken but not dead, gained a respite when the Patrons of Husbandry erected a grist mill on the river in 1877 at a cost of $16,000. This firm in 1879 became the

Patron's Flouring Mill Company. By 1882 Marengo had a furniture factory, store, blacksmith, stables, hotel, school, and 70 residents. Frank H. Gilbert remarked that year: 'The location of Marengo is very beautiful, the town resting on a green flat on the right bank of the Tukannon. The only local drawback it labors under is the steepness of the hills on both sides of the river . . . (Gilbert 1882:415).

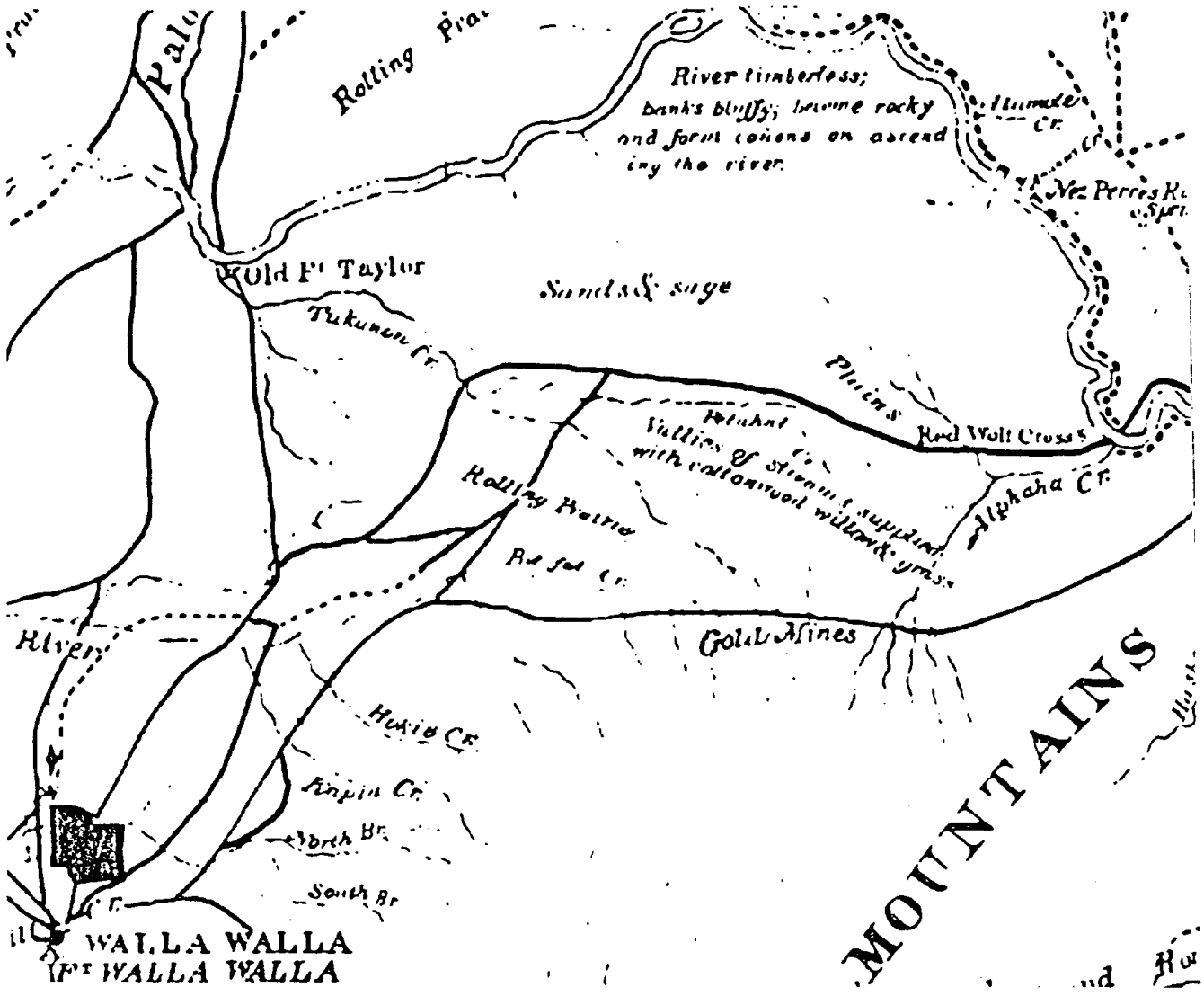

Fig. 6. Tucannon watershed with "Vallies of streams supplied with cottonwood willow & grass" and notation of gold mines (Lydecker 1873).

Environmental Conditions and Impacts

The cadastral surveyors commenced survey of townships and their subdivisions in the Tucannon watershed in 1863 and 1864. They worked first in the areas of initial settlement along Pataha Creek and the main stem of the Tucannon above its confluence with the Pataha. They subsequently extended their labors to the mouth of the river and, in time, to its headwaters in the northern slopes of the Blue Mountains. The surveyors provided detailed information about environmental conditions and suggested the course of impacts which ultimately shaped the condition of the Tucannon watershed in the twentieth century.

At its mouth surveyors Loch and Knowlton in 1873 found the Tucannon passing through a deep canyon of basalt similar to the nearby Snake River. They estimated the bluffs to reach to a height of 600 of 800 feet above the narrow stream terraces. Noteworthy in this largely treeless region, however, they observed:

> The bottom on [the Tucannon] is very narrow and the margin of the stream contains the only timber growing in the township consisting of birch, alder and willow. Also dense thickets of Thorn Rose Goose berry and sumac. The timber is fit only for fuel (Loch and Knowlton 1873b).

Approximately eight miles up the Tucannon in T12N, R38E, W.M., surveyor A. L. Knowlton wrote of the river: "The margin is fringed with timber of balm, alder, birch and willow and fit only for fuel and underbrush of willow, arrow and [sumac], rose, goose berry and mis snow drop" (Knowlton 1873b).

Above the confluence of the Pataha and the Tucannon in T12N, R39E, W.M., the surveyor found good land, well-watered by the two streams and wrote: "the valley of the Tucannon is mostly covered with a heavy growth of cottonwood, alder and birch, and an undergrowth of willow, crabapple and choke cherry (House 1863b). This recital of

specific species in the immediate stream corridor continued in the townships bisected by the Tucannon and surveyed in the 1860s (House 1864b, 1864d). Noteworthy, for example, was the observation in 1864 that in T11N, R41E, W.M., the Tucannon, in the southwestern portion of the township, was bordered by "an abundance of timber, cottonwood, pine, birch, alder and willow." The surveyor added: "Both streams [the Tucannon and the Pataha] are filled with Mountain Trout and Salmon 'run up' the Tucannon whither the Snake river Indians come in the fall to fish" (House 1864f).

The qualities of the Tucannon evoked one of the more remarkable descriptions ever penned by a cadastral surveyor when in 1872 Francis F. Loehr assessed the resources of T10N, R41E, W.M. The setting was at the point where the Tucannon cut deep into the Blue Mountains. The setting was one where Loehr noted: "there is good lumber here consisting of balm, pine, birch, and arrow." He then wrote:

> There is curious Indian tradition in reference to this part of the country. They say that the White man's God came to make the country and having furnished the Spokane and Palouse he turned his attention to the Tucannon, having formed the ridges and spurs as they are now seen - he commenced to sifting loam and sand and had leveled that portion between the Patakee and Alpowa when they held a council and decided to stop here in order that they might have a hunting ground. They then collected in great numbers and so frightened him that he left his work unfinished.
>
> The Township abounds in 'flesh, fish and fowl,' mountain trout, salmon, trout, and salmon are abundant at certain seasons of the year. Deer and Bear are plentiful and an experienced hunter never need want of meat. Grouse pheasant and Prairie Chickens are also numerous.
>
> The grandeur of this Township must be seen to be appreciated. Its lofty mountains, tall hills and cool, clear, gushing streams are elements at once charming. Why people will drink the filth of the Mississippi Valley when so much good and healthy water is going to waste here is a wonder (Loehr 1872b).

In T8N, R41E, W.M., near the headwaters of the Tucannon the surveyors found some mineral development work on gold and silver veins. They found the Tucannon averaging fifty links wide and three or four feet deep. "The waters are clear and cold and abound in fish," they noted (Collins and Carey 1915b).

In the 1860s and the 1870s settlers took up lands in this region. Those who could established farms in the narrow bottoms along the Tucannon. Others ran livestock on the bunchgrass prairies. Some, such as the Grangers at Marengo, diverted the river to provide power for their grist mill. And others ultimately discovered that the seemingly arid plains high above the river canyon possessed remarkable potential for wheat production through dry-land farming. Others, developing the small towns of Pomeroy, Pataha City, or extending the line of the Oregon Railway & Navigation Company into this watershed in the 1880s opened the prospect for logging and lumbering in the nearby Blue Mountains. Collectively these activities unleased several environmental changes:

- Cropping off bunchgrasses on the prairies and setting the stage for erosion.
- Grazing of shrubs by livestock and felling of trees for firewood by settlers in the stream corridors.
- Tilling of the high prairies with consequent erosion and release of fertilizers and agricultural chemicals into stream courses.
- Logging of forests in the Blue Mountains with potentials for erosion, deposition of debris, and changing the water temperatures through removal of shading factors.
- Construction of railroad grades with potential filling of streams with construction or other materials in the 1880s.

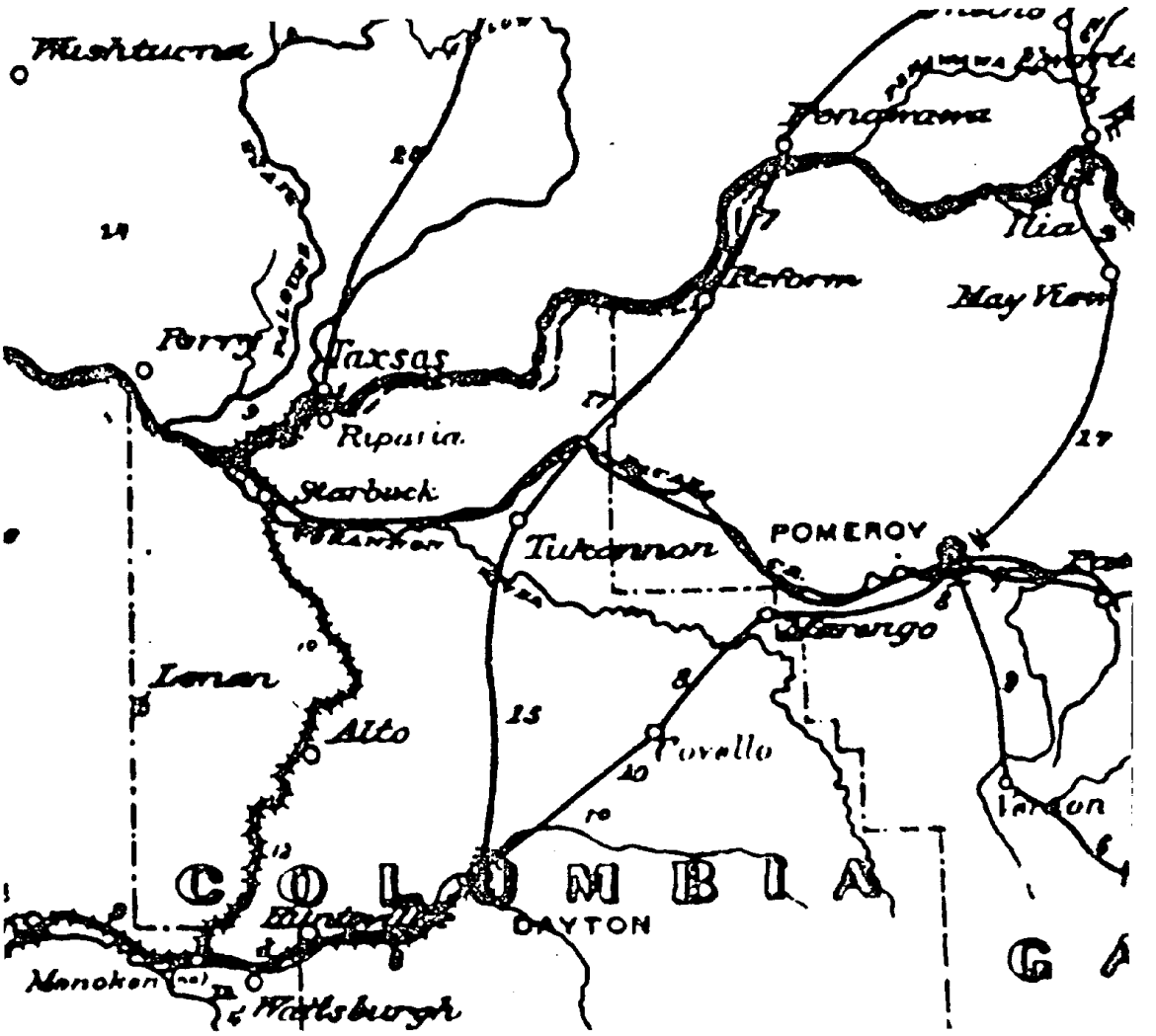

Fig. 7. Route of railroad from Waitsburg to Starbuck on the Tucannon River and route via the Pataha to Pomeroy (Roeger 1883).

TOWNSHIP 12N, RANGE 37E, W.M.

North on true line between sections 3 and 4
Var[iation] 18°30'E

3.00 Descend steep Va[riation] 21°E
33.50 **[Tucannon] Creek 200 links East of the line comes from the East Elbow and flows North**
40.00 Set a Birch post . . . for 1/4 sec[tion] cor[ner]
42.00 Precipitous bluff slightly coursing East. Impossible to chain over these mountain rocks without great danger to life and limb. I therfore return to the 1/4 sec[tion] cor[ner] and run as follows
Offset East172 chains thence
N14°E950 [chains thence]
N103°E192 Intersect left bank of Snake river thence
N30°W425
N45°W760 therefore N 77°15'W. Intersect the section line and left bank of Snake river at a point immediately above high water mark. The intersection of the line with the 3d standard and parallel faces in the river and course to be established. I here set a post . . . Thence
N45°W4.40
N41.15°W500
N30°W552 and intersect 3d standard . Parallel line at rock mound for temporary corner for Fractional section 33. The Markings of the courses above is 11.65 chains which added to 77.15 chains makes
88.80 To the intersection of the 3d standard parallel. Set a basalt stone . . . . A cottonwood tree 8 in[che]s diam[eter] bears S49°E 207 l[ink]s dist[ant] . . . .
Land hilly rough and broken
Soil on the [Tucannon] bottom 1st rate, hill on upland 3d rate
Timber of cottonwood, birch, alder, willow and pine
Underbrush fringing the stream

East on a random line between sections 3 and 10
Var[iation] 18°59'E

Descending steep
10.00 Bench level
40.00 Set a post for temp[orar]y 1/4 sec[tion] cor[ner]
46.00 Deep narrow ravine steep ascent coursing north
49.50 Top of short rocky spur N50°W
S50° E J. Carroll's house b[ea]rs N45°E steep ascent

54.50 Marsh and [Tucannon] bottom
55.50 Leave marsh
60.70 **[Tucannon] Creek 60 links wide flows West. Enter thick underbrush**
64.20 **Across Creek 70 links wide flows S75 ◦W**
68.40 **Cross Creek 75 links wide flows N60 ◦W**
70.00 Leave bottom and ascend
77.50 Road running N45 ◦W and S45 ◦E
79.58 Intersect section line 43 links north of post corner to sections 2, 3, 10 and 11. I therefore run from this corner on a true line between section 3 and 10
N89 ◦42'West
39.79 Set a birch post . . . .
79.58 The corner for sections 3, 4, 9 and 10. Land first half broken second half level. Soil bottom first rate hills second and 3d rate, **Timber fringing the stream birch and alder.** Undergrowth rose thorn and [sumac]

North on a true line between sections 10 and 11
Var[iation] 21 ◦15'E

Descend
12.00 Ravine coursing N20 ◦E
Ascend hill side facing East
25.00 Descend side hill facing East
40.00 Set a birch post . . . .
43.25 Ditch fence N70 ◦E and S70 ◦W
55.50 Top and bottom N70 ◦E and S70 ◦W
62.00 Enter dense underbrush
64.00 **[Tucannon] Creek 70 links wide bears N60 ◦W**
66.20 Offset 100 links east to avoid bend in creek
68.00 Measure 100 links West and North line leave underbrush
Ascend
72.00 Cross road running N45 ◦W and S45 ◦E
80.00 Set a birch post . . . .
Land 1st half mile broken second half mile level and arable. Soil on bottom first rate. Hills 2d and 3d rate. **Timber skirting the stream alder, birch, willow**
Underbrush willow, thorn rose and [sumac]

East on a random line between sections 11 and 14
Var[iation] 21 ◦44'E

Ascend
4.00 Top of spur b[ea]rs N20 ◦E and S20 ◦W

Descend

35.50 [Tucannon] bottom and ditch fence bears N 45°E and S45°W

40.00 Set a post for temp[orar]y 1/4 sec[tion] cor[ner]

49.00 Enter timber and under brush

52.70 **Left bank of [Tucannon] Creek 200 links wide flows N45°W**

56.50 Leave underbrush

60.00 E. McDonald's house b[ear]s N35°15'W

64.80 Cross fence N45°W and S45°E and leave field

65.50 Road N45°W and S45°E ascend steep

79.92 Intersect section line 56 links North of post corner of sections 11, 12, 13 and 14. I therefore run from this corner on true line between sections 11 and 14
N89°36'West

39.86 Set a basalt rock . . . .

79.72 The corner to sections 10, 11, 14 and 15
Land first half hilly, 2d half level and arable. Soil in bottom first rate in bottom 2d rate
Creek fringed with alder, willow and birch
Timber. Underbrush willow, rose and thorn

<u>North on a true line between sections 13 and 14</u>
Var[iation] 21°30'E

Gradual descent

40.00 Set a birch post . . . Mrs. Crawford's house b[ea]rs N41°W

40.60 [Tucannon] bottom

42.00 Enter underbrush

45.50 **Branch of [Tucannon] 50 links wide flows N65°W**

47.18 **[Tucannon] Creek 50 links wide flows West**

54.50 Slough 30 links wide

56.00 Leave underbrush enter stubble field

64.00 Cross fence N50°W and S50°E

69.25 Road runs N60° W and S60°E

70.00 Leave flat and ascend steep and rocky

76.00 Indian grave 1 chain West of line

77.00 Top of Butte

80.00 Set birch post . . . .
Land hilly. Bottom level. Soil in bottom first rate. Upland 3d rate strong impregnated with alkali. **Creek fringed with timber, birch, alder and willow.**
Underbrush pine, sumac, cherry and alder

<u>East on a random line between sections 13 and 24</u>

Var[iation] 21 ◦59'E

Descend

25.00 Enter Mason Hollow N and S

30.25 Road running N30 ◦E and S30 ◦W

31.40 Spring Brook 6 links wide flows N35 ◦E

37.00 Leave hollow and ascend steep rocky point

38.50 Top thence along side of bluff facing N

40.00 Set a post for 1/4 section corner (temporary) Mason's dwelling house b[ea]rs N29 ◦E. Barn N8 ◦E

49.15 Mason's dwelling house b[ea]rs N7 ◦W. Barn N11 ◦W

56.00 Indian trails up and down [Tucannon]

65.50 Bluff bank of [Tucannon]

65.75 **[Tucannon] Creek 80 links wide flowing rapidly N85 ◦W. Enter thick underbrush**

72.00 Leave underbrush and enter plowed ground

80.07 Intersect range line and East b[oundar]y 40 links South of post corner for sections 13 and 24. I therefore run from the corner on a true line between sections 13 and 24
S89 ◦42'West

40.03 Set willow post . . . .

80.07 The corner to sections 13,14, 23 and 24. Land, upland broken, bottom level. Soil 1st and 3d rate. **Timber on Creek bottom birch, alder and willow.** Underbrush some with rose, alder and sumac

General Description

The Southern and Western portions of this township is high rolling prairie containing a fair portion of agriculture land the soil being a ligh ashy loam second rate and well covered with bunch grass. The Northeastern portion is cut into deep canyons and ravines is rocky and rough. Snake River and **[Tucannon] Creek flow through this portion and both streams have present that wild scenery which characterizes the former from its source to its confluence with the Columbia River being walled in by precipitous ledges of Basaltic rock rising one above the other to the height of 6 to 800 f[ee]t.**

The bottom on [Tucannon] is very narrow and the margin of the stream contains the only timber growing in the township consisting of birch, alder and willow. Also dense thickets of Thorn Rose Goose berry and sumac. The timber is fit only for fuel. The settlements made on this township are confined to this stream and are generally engaged in raising stock.

The patrons of Husbandry contemplate erecting a warehouse on the left bank of Snake River immediately above the Mouth of the [Tucannon] and are now furnishing lumber at the site of Fort Taylor for that purpose. There is

considerable fall in [Tucannon] and sufficient water power can be attained here for an extensive flouring mill. The Township considered [geologically] is like the surrounding country. Basaltic mineral of value being native. The color of gold can be obtained in the crevices along Snake River on low water but not in quantities to pay (Loch and Knowlton 1873b).

Survey commenced Nov. 15th, 1873
Survey completed Nov. 28, 1873

TOWNSHIP 12N, RANGE 38E, W.M.

North on true line between sect[ion]s 19 and 24
Variation 21°15'E

2.50	Descend abruptly
29.50	Ravine sheds N45°E ascend
35.50	Top of spur b[ea]rs NE and SW ascend
40.00	Set a post . . . for 1/4 section corner
60.50	Steep bluff overlooking [Tucannon]
62.50	[Tucannon] bottom enter thick brush
66.00	**[Tucannon] Creek 75 links wide flows N70°W**
68.00	Leave underbrush and enter plowed ground of W. Mason S80°E and N70°W
80.00	Set a post . . . for corner to sections 13, 24, 18 and 19. Land hilly and broken bottom level Soil upland third rate, bottom first rate. **Timber on margin of stream Birch and alder,** underbrush same with Rose, Willow, Thorn, Cherry, Arrow and [sumac]

North on a true line between sections 19 and 20
Variation 20°E

	Descend
8.00	Ravine sheds NW
15.00	Plateau
36.80	Descend bluff very steep
39.50	Bottom enter dense underbrush
40.00	Set a post for 1/4 section corner from which A cherry 3 in[ches] dia[meter] b[ea]rs N85°E 11 links dist[ant] A cherry 4 in[che]s dia[meter] b[ea]rs N30°E 11 links dist[ant]
40.50	**[Tucannon] Creek 75 links wide flows W**
43.98	Leave underbrush enter plowed ground
46.83	Leave plowed ground
55.68	Cross road E and W
62.50	Leave bottom and ascend outcropping of Basaltic rock b[ea]rs S65°W
77.50	Top of spur
80.00	Set a post . . . for corner to sections 17 and 18, 19 and 20. Land hilly, rough, rocky and broken level on the bottom. Soil bottom first rate alkali flat and upland Grass third rate, underbrush Willow, Birch, Alder, [sumac] and rose

North on a true line between sections 20 and 21

Variation 18°45'E

Bluff facing East descend

8.00	Descend steep
24.00	Trail up and down [Tucannon]
24.50	Bottom
25.50	**[Tucannon] Creek 75 links wide flows W**
31.32	H.A. Montgomery's house b[ea]rs S84°30'E
	Camp bears S88°30'E
33.47	Enter underbrush
34.50	Leave underbrush
38.50	Leave bottom and ascend
59.40	McHargins Road b[ea]rs N75°W S75°E
40.00	Set a post . . . .
	House b[ea]rs N78°W 507 chains dist[ant]. Spring b[ear]s N80° E 2 chains dist[ant]
54.45	Gulch sheds S30°W. Ascend
75.75	Summit of divide between Gulch and MCHargins hollow b[ear]s N50°E and S50°W
80.00	Set a post . . . .
	Land bottom level, upland hilly and broken.
	Soil on bottom 1st rate upland 3d rate. Underbrush on margin of stream willow, cherry and [sumacs], birch, alder and rose and Goose berry. Also wild snow drop an interesting little shrub

North on a true line between sections 21 and 22

Variation 20°15'E

Gentle slope north

16.40	Road runs east and west
16.70	Cross fence and enter field of S.F. Montgomery
17.50	Bottom
19.75	Enter dense underbrush
20.00	House b[ea]rs east 140 links dist[ant]
21.50	**[Tucannon] Creek 75 links wide flows West**
25.00	Leave underbrush and enter H.A. Montgomery Meadows
38.80	Cross fence E and W and leave meadows
40.00	Set post . . . for 1/4 section corner
41.00	Foot of Grizzly bluff ascend very steep
49.50	Perpendicular ledge of basalt rock 8 feet high
50.00	Top of bluff ascend gradually
60.00	Summit of ridge 600 feet high b[ea]rs E and W descend
80.00	Set a post . . . for corner to sections 15, 16, 21 and 22. Land on bottom level. The bluff on right bank of stream ascend it an

average of 44 ◦ soil 1st and 3d rate

North on a true line between sections 22 and 23
Variation 22◦15'E

Descend very steep 200 f[ee]t
4.00 Trail up and down [Tucannon]
5.41 **[Tucannon] Creek 100 links wide flows North 60◦W and enter underbrush**
9.25 Leave underbrush
12.40 Leave bottom a large spring (lake N and S) 75 links West of line gently ascend. Strong alkali
15.00 Leave strong alkali
40.00 Set a post . . . for 1/4 section corner
60.50 Spur b[ea]rs S45◦E and N45◦W
63.50 Ravine sheds S45◦East
80.00 Set a post . . . for corner to sections 14, 15, 22 and 23. **Land cut by the [Tucannon] flowing Westward very steep on the left bank, gentle ascent on the right bank.** Soil on bottom first rate. Upland 3d rate. Underbrush white and red willow, birch alder, elder and [sumac]

North on a true line between sections 23 and 24
Variation 20◦15'E

Descend steep
20.00 House b[ea]rs N75◦W
23.25 Trail up and down [Tucannon]
23.75 Bluff bank of creek
24.00 **[Tucannon] Creek 75 links wide flows west, enter dense timber and underbrush**
33.88 Leave bottom and ascend
34.63 Leave timber and underbrush
40.00 Set a post . . . for 1/4 section corner
80.00 Set a post . . . for corner to sections 13, 14, 23 and 24. **Land hilly cut by the [Tucannon] flowing West bottom level but narrow. Timber in creek Alder and Birch,** underbrush White and Red willow, arrow, Rose, cherry and [sumac]
Soil first and third rate

General Description

This Township is divided into nearly equal portions by the [Tucannon] Flowing through sections 24, 23, 22, 21, 20 and 19. The margin is fringed with

timber of balm, alder, birch and willow and fit only for fuel and underbrush of willow, arrow and [sumac], rose, goose berry and mis snow drop. Snake river also cuts the North West corner of sections 6 and presents that same fearful desolation that characterizes it for hundreds of miles above. That portion of the Township lying south of [Tucannon] has two main water sheds bearing in a general North western and direction and cutting it into a rolling rough and broken region. That portion lying North of [Tucannon] is also cut by many ravines breaking into the [Tucannon] on the South and Snake River on the North. The [Tucannon] bottom is very narrow the soil highly productive and of first rate quality. The upland is of a light ashy character overlying a basaltic formation. The South and Soth West hill sloopes are generally Basaltic outcroppings and rocky and rough and yield but little grass.

This Township lacks living water facilities for irrigation and has far less rain fall than at the base of the Blue Mountains and consequently will remain a pasture field for herding. The geological formation is of Basaltic origin. No other formation outcropping, even the deepest canyon when the erosion is the deepest.

There are scattered and various points especially the Western portion and generally on the ridges. Granite boulders, weighing tons, brought from their native ledges by unknown but powerful agency. They are evidently not natives of this Township. There is no evidence of any mineral of value. The color of float gold can be obtained along the banks of Snake River but not in paying quantities. Neither lime nor coal (Knowlton 1873b).

Survey commenced April 22, 1873
Survey completed May 5th, 1873

TOWNSHIP 12N, RANGE 39E, W.M.

West boundary of section 19 [not available]

West on a random line between sec[tion]s 19 and 30
Var[iation] 20°E

21.25 A road bears NW and SE. Enter Tucannon Valley
22.50 A fence bears NW and SE. Enter field.
30.50 G. Platter's House bears North 250 l[in]ks
31.75 Leave field enter willow bears NW and SE
36.00 **Tucannon River 75 l[in]ks wide course NW**
38.25 A road bears SE and NW. Leave timber
40.00 Set a post for temporary quar[ter] sec[tion] corner
40.75 Leave Tucannon Valley bears NW and SE
76.30 Intersect West Boundary 40 l[in]ks South of the cor[ner] to sec[tion]s 19 and 30
East on a true line between sec[tion]s 19 and 30
Var[iation] 19°43'E
36.30 Set a post in mound of earth for 1/4 sec[tion] cor[ner] . . . .
76.30 The corner to sections 19, 20, 29 and 30
Land in valley level - Soil 1st rate - other rolling - Soil 2d and 3d rate
Timber cottonwood and willow

North between sections 29 and 30
Var[iation] 20°E

27.00 Enter Tucannon Valley bears NW and SE - timber
28.50 **Tucannon river 75 l[in]ks wide course NW**
38.00 **Tucannon river 75 l[in]ks wide course NE**
40.00 Set a post for quar[ter] sec[tion] cor[ner] form which
A cottonwood 12 in[che]s diam[eter] bears S85°E 2 l[ink]s dist[ant]
A cottonwood 8 in[che]s diam[eter] bears N85°W 10 l[ink]s dist[ant]
41.50 **Tucannon river 75 l[in]ks wide course NW**
42.75 Leave valley and timber bears NW and SE
43.75 A road bears NW and SE
56.40 A perpendicular rock ledge 30 feet high
80.00 Set a post in mound of earth for corner to sec[tion]s 19, 20, 29 and 30.
Land in valley level. Soil 1st rate - other rolling - soil 2d and 3d rate. Timber cottonwood, alder, birch and willow

East on a random line between sec[tion]s 29 and 32
Var[iation] 20∘E

37.30 **Tucannon River 150 l[in]ks wide, course NW** and enter Tucannon Valley and timber
40.00 Set a post for temporary quar[ter] sec[tion] cor[ner]
46.00 Leave timber bears NW and SE
62.20 A trail bears NW and SE
66.00 Leave Tucannon Valley bears NW and SE
80.20 Intersect N and S line 15 l[in]ks south of the corner to sec[tion]s 28, 29, 32 and 33
West on a true line between sec[tion]s 29 and 32
Var[iation] 20∘6'E
40.10 Set a post in mound of earth for quar[ter] sec[tion] corner . . . .
80.20 The corner to sec[tion]s 29, 30, 31 and 32
Land in valley. Soil 1st rate - other rolling - Soil 2d rate - Timber cottonwood and alder - undergrowth willow and rose bush

North between sections 32 and 33
Var[iation] 20∘30'E

40.00 Set a post in mound of earth for quar[ter] sec[tion] corner . . . .
48.00 **Tucannon River 75 l[in]ks wide course NW and enter timber** and valley
55.50 Leave timber bears NW
68.00 A trail bears NW
72.00 Leave valley bears NW and SE
80.00 Set a post in mound of earth for corner to sections 28, 29, 32 and 33 . . .
Land rolling - Soil 1st and 2d rate
Timber cottonwood and alder
Undergrowth crabapple and willow

North between sec[tion]s 33 and 34
Var[iation] 20∘30'E

27.60 **Tucannon River 75 l[in]ks wide course NW**
32.00 A trail bears NW
40.00 Set a post in mound of earth for quar[ter] sec[tion] corner . . . .
80.00 Set a post in mound of stone for coner to sections 27, 28, 33 and 34 as per instructions
Land hilly - Soil 2d and 3d rate

General Description

This Township contains a large amount of good land, chiefly situated on the Petakan and Tucannon, and is well watered by those streams, the former passing through the Township from E to W - the latter through the SW corner, the valley of the Tucannon is mostly covered with a heavy growth of cottonwood, alder and birch, and an undergrowth of willow, crabapple and choke cherry. The Petakan is bordered with a growth of willow, occasionally a grove of birch and alder - The uplands are rolling, and covered with a luxurious growth of bunch grass - This Township is well adapted to farming and stock growing - contains three settlers (House 1863b).

TOWNSHIP 11N, RANGE 39E, W.M.

North boundary of section 3 [not available]

North on a random line between sec[tion]s 2 and 3
Va[riation] 20∘30'E

40.00 Set a post for temporary 1/4 sec[tion] cor[ner]
47.00 Enter Tucannon Valley, bears NW and SE
47.50 **Tucannon River 100 l[in]ks wide, course NW**
48.00 Enter timber
54.00 Leave timber
61.00 A trail bears NW and SE
63.00 Leave valley bears NW and SE
80.40 Intersected North boundary of Township 20 l[in]ks west of corner to sec[tion]s 2 and 3.
S9∘W on a true line between sec[tion]s 2 and 3
40.40 Set a post in mound of earth for 1/4 sec[tion] cor[ner] . . . .
80.40 The cor[ner] to sec[tion]s 2, 3, 10 and 11
Land in valley level, soil 1st rate, other hilly soil 3d rate. Timber, birch, alder and cottonwood

North on a random line between sec[tion]s 1 and 2
Var[iation] 20∘30'E

28.00 Enter Tucannon Valley and timber bears NW and SE
29.00 **Tucannon River 100 l[in]ks wide, course NW**
34.50 Leave timber, bears NW and SE
36.00 Enter swamp bears NW and SE
40.00 Set a post for temporary 1/4 sec[tion] cor[ner]
48.00 Leave marsh bears NW and SE
51.25 Leave Tucannon Valley and ascend rocky hill bears NW and SE
80.25 Intersected North boundary Township 18 l[in]ks East of the cor[ner] to sec[tion]s 1 and 2
30∘9'E on a true line between sec[tion]s 1 and 2
40.25 Set a post in mound of earth (in marsh) for 1/4 sec[tion] cor[ner] . . .
80.25 The cor[ner] to sec[tion]s 1, 2, 11 and 12
Land in valley level, soil 1st rate
Timber, alder, birch and cottonwood, other hilly - soil 3d rate

General Description

This Township contains considerable food land for agricultural purposes,

and is well adapted to farming and stock growing, being covered with a thick growth of good grass, is well watered by numerous springs and **the Tucannon river, which passes through its NE corner, and is bordered by a growth of cottonwood, alder, birch and willow** - contains three settlers (House 1864b).

TOWNSHIP 11N, RANGE 40E, W.M.

West boundary of section 6 [not available]

North on a random line between sec[tion]s 5 and 6
Var[iation] 20∘45'E

5.00	Enter Tucannon Valley bears E and W
8.50	**A branch of Tucannon riv[er] 10 l[in]ks wide course SW**
10.50	Enter timber bears E and W
12.30	**A branch of Tucannon river 15 l[in]ks wide West**
14.00	**A branch of Tucannon river 20 l[in]ks wide West**
20.00	**A branch of Tucannon river 40 l[in]ks wide West**
20.50	Leave timber and valley bears E and W
40.00	Set a post for temporary quar[ter] sec[tion] cor[ner]
80.30	Intersected North boundary of Township 20 l[in]ks East of cor[ner] to sec[tion]s 5 and 6 form which I run South on a true line bet[ween] sec[tion]s 5 and 6 Var[iation] 20∘54'E
40.30	Set post in mound of earth for q[aurte]r sec[tion] cor[ner] . . . .
80.30	The cor[ner] to sec[tion]s 5, 6, 7 and 8 Land in valley level - Soil 1st rate Other hilly. Soil 3d rate Timber cottonwood, alder and willow

East on a random line bet[ween] sec[tion]s 5 and 8
Var[iation] 20∘45'E

32.00	Enter Tucannon valley and timber bears NW and SE
34.25	**Tucannon river 75 l[in]ks wide course NW**
36.00	Leave timber and enter field of oats and barley
40.00	Set a post for temporary q[uarte]r sec[tion] cor[ner].
80.00	Intersected N and S line at cor[ner] to sec[tion]s 4, 5, 8 and 9. From which I run West on a true line bet[ween] sec[tion]s 5 and 8 Var[iation] 20∘45'E
40.00	Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
80.00	The cor[ner] to sec[tion]s 5, 6, 7 and 8 Land in valley level. Soil 1st rate Other hilly. Soil 2d and 3d rate Timber. Cottonwood, alder and willow

North between sections 8 and 9
V[ariation] 20∘45'E

40.00 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
58.50 Lewiston and Walla Walla road bears NE and SW
64.00 Enter Tucannon Valley bears NW and SE
64.25 **Tucannon river 75 l[in]ks wide course NW**
65.00 Enter timber
67.00 Leave timber
68.00 Mr. Starks house bears West 1 ch[ain] distant
69.15 Fence E and W enter garden
72.50 Fence E and W leave garden and enter field
80.00 Set a post in mound of earth for cor[ner] to sec[tion]s 4, 5, 8 and 9 . . . .
Land in valley level - Soil 1st rate
Other hilly - Soil 3d rate
Timber cottonwood, alder and willow

North between sec[tion]s 9 and 10
Var[iation] 20∘45'E

40.00 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
50.00 Enter Tucannon valley bears NW and SE
54.50 Enter timber
57.00 **Tucannon river 75 l[in]ks wide course NW**
61.00 Leave timber
77.50 Leave Tucannon valley bears NW and SE
80.00 Set a post in mound of earth for cor[ner] to sec[tion]s 3, 4, 9 and 10 . . . .
Land in valley level - Soil 1st rate
Other hilly - Soil 3d rate
Timber, cottonwood, alder, willow and cherry

North between sections 10 and 11
Var[iation] 20∘45'E

4.00 Enter Tucannon valley bears NW and SE
7.50 Enter timber bears NW and SE
18.50 **Tucannon river 75 l[in]ks wide course NW**
21.50 Leave timber
25.00 Leave Tucannon valley bears NW and SE
40.00 Set a post in mound of stone for q[uarte]r sec[tion] cor[ner] as per instructions
80.00 Set a post in mound of earth for cor[ner] to sec[tion]s 2, 3, 10 and 11 . . . .
Land in valley, level - Soil 1st rate
Other hilly - Soil 3d rate

Timber - cottonwood, alder, willow and cherry

East on a random line bet[ween] sec[tion]s 11 and 14
Var[iation] 20∘45'E

7.50 Enter Tucannon valley bears NW and SE
30.75 **Tucannon river 75 l[in]ks wide course NW**
31.50 Enter timber
32.75 Nez Perce trail bears NE and SW
40.00 Set a post for temporary q[uarte]r sec[tion] cor[ner]
78.75 **Tucannon river 75 l[in]ks wide course SW**
80.30 Intersected N and S line 25 l[in]ks North of cor[ner] to sec[tion]s 11, 12, 13 and 14 from which I run
West on a true line bet[ween] sec[tion]s 11 and 14
Var[iation] 20∘34'E
40.15 Set a post for q[uarte]r sec[tion] cor[ner] form which
A cottonwood 12 in[che]s dia[meter] bears S25∘W 21 l[in]ks dist[ant]
A cottonwood 5 in[che]s dia[meter] bears N65∘E 80 l[in]ks dist[ant]
80.30 The cor[ner] to sec[tion]s 10, 11, 14 and 15
Land level - Soil 1st rate
Timber - cottonwood, alder, willow and cherry

North between sections 11 and 12
Var[iation] 20∘45'E

3.15 **Tucannon river 75 l[in]ks wide course NW**
8.00 Leave timber Nez Perce Trail bears E and W
8.75 A fence bears E and W. Enter field
9.25 Mr. Chase's house bears East about 150 l[in]ks dist[ant]
18.00 Leave Tucannon valley
24.00 A fence bears NW and SE leave field
40.00 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
80.00 Set a post in mound of earth for cor[ner] to sec[tion]s 1, 2, 11 and 12 . . . .
Land in valley, level - Soil 1st rate
Other hilly. Soil 3d rate
Timber cottonwood, alder, cherry and willow

East on a random line bet[ween] sec[tion]s 12 and 13
Var[iation] 20∘45'E

20.00 **Tucannon river overflows bottom**

35.50 Leave overflowed bottom
37.50 Leave timber bears NW and SE
40.00 Set a post for temporary q[uarte]r sec[tion] cor[ner]
45.00 Leave valley bears NW and SE
80.20 Intersected East boundary of Township 15 l[in]ks North of cor[ner] to sec[tion]s 12 and 13 from which I run
West on a true line bet[ween] sec[tion]s 12 and 13
Var[iation] 20°39'E
40.10 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
80.20 The cor[ner] to sec[tion]s 11, 12, 13 and 14
Land in valley level - Soil 1st rate
Other rolling - Soil 3d rate
Timber - cottonwood, alder, willow, cherry and birch - Undergrowth same

General Description

This Township has a large portion of good land, is adapted to farming and stock growing, is well supplied with water by the Tucannon river which passes through the Township from the East to the West boundary, is bordered with good timber - cottonwood, alder, willow, birch and cherry - contains three settlers having under cultivation fine farms and large bands of horses, sheep and cattle (House 1864d).

TOWNSHIP 11N, RANGE 41E, W.M.

West boundary of section 18 [not available]

West on a random line bet[ween] sec[tion]s 18 and 19
Var[iation] 21∘E

31.50 **Tucannon river 75 l[in]ks wide course NW**
40.00 Set a post for temporary q[uarte]r sec[tion] cor[ner]
79.25 Intersected West boundary of Township 20 l[in]ks South of cor[ner] to sec[tion]s 18 and 19, from which I run East on a true line bet[ween] sec[tion]s 18 and 19
Var[iation] 20∘51'E
39.25 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
79.25 The cor[ner] to sec[tion]s 17, 18, 19 and 20
Land hilly - Soil 2d and 3d rate
Timber - birch, cottonwood, alder and willow
Undergrowth choak cherry, elder and rosebush

West boundary of section 19 [not available]

(House 1864f)

[TOWNSHIP 11N, RANGE 40E, W.M.]

East on a random line bet[ween] sec[tion]s 24 and 25
Var[iation] 20°45'E

40.00 Set a post for temporary q[uarte]r sec[tion] cor[ner]
67.50 Enter Tucannon valley bears NE and SW
69.00 **Tucannon river course NE 75 l[in]ks wide and enter timber**
80.30 Intersected East boundary of Township 25 l[in]ks South of cor[ner] to sec[tion]s 24 and 25 from which I run West on a true line bet[ween] sec[tion]s 24 and 25
Var[iation] 20°56'E
40.15 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
80.00 The cor[ner] to sec[tion]s 23, 24, 25 and 26
Land in valley level - Soil 1st rate
Other hilly - Soil 3d rate
Timber, cottonwood, alder, birch and willow

West boundary of section 30 [not available]

West on a random line between sec[tion]s 30 and 31
Var[iation] 21°E

2.50 Enter timber bears NW and SE
16.00 **Tucannon river 75 l[in]ks wide course NW**
22.00 Leave timber bears NW and SE
40.00 Set a post for temporary q[uarte]r sec[tion] cor[ner]
60.00 Leave Tucannon valley bears NW and SE
79.50 Intersected West boundary of Township 15 l[in]ks South of cor[ner] to sec[tion]s 30 and 31 from which I run East on a true line bet[ween] sec[tion]s 30 and 31
Var[iation] 20°54'E
39.80 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
79.80 The cor[ner] to sec[tion]s 29, 30, 31 and 32
Land in valley level - Soil 1st rate - Timber, cottonwood, birch, alder and willow - Undergrowth same
Other hilly - 3d rate

North between sections 31 and 32
Var[iation] 21°E

40.00 Set a post in mound of earth for q[uarte]r sec[tion] cor[ner] . . . .
67.00 Enter Tucannon Valley bears NW and SE
74.50 **Tucannon river 75 l[in]ks wide course NW**

80.00 Set a post in mound of earth for cor[ner] to sec[tion]s 29, 30, 31 and 32 . . . .
Land in valley level - Soil 1st rate
Other hilly - Soil 3d rate

General Description

This Township is well watered [by] the Tucannon river passing through the South West portion bordering which there is some first rate land and an abundance of timber, cottonwood, pine, birch, alder and willow. The Patakah passes through the NW portion and is bordered with first rate soil and a growth of small willow and alder. **Both streams are filled with Mountain Trout and Salmon "run up" the Tucannon** whither the Snake river Indians come in the fall to fish - the interior of this Township is hilly and poor soil, covered with fair grass and affording good pasturage - There is one farm (Crawford's) in sec[tion] 5 (House 1864f).

TOWNSHIP 10N, RANGE 41E, W.M.

North boundary of section 4 [not available]

North on a random line bet[ween] sec[tion]s 4 and 5
Va[riation] 24°42'E

	Descend side hill facing S
14.00	Bottom enter underbrush
33.00	A charred pine stub Va[riation] 21°27'E
40.00	Set a post for temporary 1/4 sec[tion] cor[ner]
50.20	A small stream of water 10 l[in]ks wide flows NW
69.00	Swamp and beaver dams
71.90	**[Tucannon] Creek 69 l[in]ks wide flows N10°W**
78.95	**[Tucannon] Creek 50 l[in]ks wide flows East**
80.29	Intersect Township line 48 l[in]ks West of the corner to sec[tion]s 4, 5, 32 and 33 I therefore run from this corner South on a true line between sec[tion]s 4 and 5
43.24	Set a post for [text illegible] S60°W
40.29	Set a post for 1/4 sec[tion] cor[ner] from which a pine tree 36 in[ches] dia[meter] b[ea]rs S44°E 30 l[in]ks dist[ant] Pine tree 8 in[che]s dia[meter] . . .
80.29	The cor[ner] to sec[tion]s 4, 5, 8 and 9 Land nearly level. Soil 1st rate. Timber birch, alder, pine. Undergrowth quaking asp[en], thorn, cherry, arrow, red and white willow

East on a random line bet[ween] sec[tion]s 4 and 9
Va[riation] 25°E

	Descend
2.00	Bottom
13.25	**Tucannon Creek flows N30°E 60 l[in]ks dist[ant]**
22.50	Leave bottom ascent very steep and rocky
25.80	Perpendicular ledge of rock 15 f[ee]t high N9°W
28.50	Perpendicular ledge of rock 12 f[ee]t high N9°W
36.25	Perpendicular ledge of rock 25 f[ee]t high N10°W
37.50	Top of spur bears N and E descend
40.00	Set basalt rock for temp[orary] 1/4 sec[tion] cor[ner]
42.75	Ravine flows S45°W ascend
55.80	Top of spur SW and NE descend
62.10	Ravine flows SW ascend
80.42	Intersect section line 42 l[in]ks N of cor[ner] to sec[tion]s 3, 4, 9

and 10. I therefore run from this corner West on a true line between sec[tion]s 4 and 9 N89°42'W

40.21 Set a basalt rock in a ledge of rock for 1/4 sec[tion] cor[ner]

80.42 The cor[ner] to sec[tion]s 4, 5, 8 and 9
Land on bottom level - other mountainous and hilly. Soil 2d, 3rd rate. Timber pine and balm

East on a random line bet[ween] sec[tion]s 9 and 16

Va[riation] 20°E

Descend

22.96 A basalt rock service bush grows upward

23.61 Ledge of basalt rock 8 f[ee]t high

34.71 Bottom enter timber and underbrush

38.46 A small stream 15 l[in]ks wide flows N

40.00 Set a post for temporary 1/4 sec[tion] cor[ner]

44.71 **Tucannon Creek flows N10°W 52 l[in]ks dist[ant]**

49.25 Leave bottom and timber ascend

50.88 An overhanging cliff of volcanic tufa 40 feet high, *an interesting geological problem*

61.96 Top of spur b[ear]s N30°W S30°E ascend

73.90 Ravine flows S50°E ascend

80.71 Intersect section line at rock cor[ner] of sec[tion]s 9, 10, 15 and 16. I therefore run from this corner West on true line bet[ween] sec[tion]s 9 and 16 West

40.35 Set a post for 1/4 sec[tion] cor[ner] from which
A pine 36 in[ches] dia[meter] . . . .
An alder 6 in[ches] dia[meter] . . . .

80.71 The corner for sec[tion]s 8, 9, 16 and 17
Land on bottom level, other mountainous. Soil on bottom 1st rate other 3rd rate. Timber, balm, pine, alder and birch. Underbrush same with willow and cherry

East on a random line bet[ween] sec[tion]s 16 and 21

Va[riation] 18°30'E

Side hill facing E descend

8.06 Ravine flows S45°E 50 l[in]ks between this point turns and flows S85°E descend side hill facing S

28.00 Ravine flows N45°E some good timber

40.00 Set a post for temp[orary] 1/4 sec[tion] cor[ner]

40.75 A small ravine flows North

44.15 Top of a sharp ridge bears N10°E S10°W

61.25 Bar

62.00 Creek 25 l[in]ks wide
76.50 Leave bottom and timber and ascend
80.24 Intersect section line 23 l[in]ks S of the cor[ner] to sec[tion]s 21, 22, 15 and 16. I therefore run from this corner West on a true line between sec[tion]s 21 and 16
S89°50'W
40.17 Set a post and marked stone in mound of stone for 1/4 sec[tion] cor[ner] as per instructions
80.24 The corner to sections 20, 21, 16 and 17
Land 1st half mountainous rocky and rough
Soil 3d rate
Timber pine and fir in ravines, spurs bald
Undergrowth arrow, willow, cherry, rose, raspberry, gooseberry

North bet[ween] sec[tion]s 21 and 22
Va[riation] 21°27'E

Descend
4.75 Spring branch flows N45°E ascend
10.00 Top of spur descend
18.06 Tucannon bottom
21.50 Cross fence N30°W and S30°E corner of C. Bonchin
23.00 Cross fence and leave field N40°E and S40°W
40.00 Set a post for 1/4 sec[tion] cor[ner] from which an arrowood 3 in[che]s dia[meter] . . . .
A birch 4 in[che]s dia[meter]
42.40 **Cross Tucannon Creek 75 l[in]ks wide flows N25°W**
54.10 Cross Cummings Creek 15 l[in]ks wide flows N85°W
56.00 Leave bottom and ascend
65.00 Top of spur bears S60°W and N60°E descend
80.00 Set post in mound of rock for cor[ner] to sec[tion]s 15, 16, 21 and 22
Land on Tucannon level upland hilly
Soil on botom 1st rate upland 3d rate
Timber pine, balm, alder and birch
Underbrush thorn, cherry, arrow, quaking asp[en], elder, goose and raspberries and rosebush

East on a random line bet[ween] sec[tion]s 22 and 27
Va[riation] 21°45'E

Descend along side hill facing N
5.00 Tucannon bottom
28.00 **Tucannon Creek 50 l[in]ks wide flows N15°W**

29.00 Leave bottom and ascend
40.00 Set basalt rock for temp[orary] 1/4 sec[tion] cor[ner]
80.74 Intersect section line 64 l[in]ks N of rock cor[ner] of sec[tion]s 22, 23, 26 and 27
I therefore run from this corner West on a line bet[ween] sec[tion]s 22 and 27
40.00 Set a basalt rock at N89°33'W
40.37 Set basalt rock . . . for 1/4 sec[tion] cor[ner]
80.74 The cor[ner] to sec[tion]s 21, 22, 27 and 28
Land hilly rocky and rough. Bottom level and arable soil hills 3d rate. Bottom 2d rate. Timber pine, alder, balm and birch on Tucannon. Underbrush white and red willow, arrow and rose

<u>East on a random line between sec[tion]s 27 and 34</u>
Va[riation] 22°30'E

Descend very steep
9.93 Ravine flows N50°E ascend
22.10 Top of spur bears N50°E and S50°W
Descend
40.00 Set basalt rock . . . for temp[orary] 1/4 sec[tion] cor[ner]
58.50 Bottom
59.50 Spring branch flows N45°E
71.50 **Tucannon Creek 75 l[in]ks wide flows N25°W**
73.00 Leave bottom
80.65 Intersect section line 25 l[in]ks N of rock cor[ner] to sec[tion]s 26, 27, 34 and 35
I therefore run from this cor[ner] West on a true line between sec[tion]s 27 and 34
N89°49'W
40.32 Set basalt rock . . . for 1/4 sec[tion] cor[ner] as per instructions
80.63 The cor[ner] to sec[tion]s 27, 28, 33 and 34
Land mountainous rocky and rough
Level of Tucannon on bottom pine, alder and balm. Underbrush maple, vinebark, rose and red root

<u>North on a true line bet[ween] sec[tion]s 34 and 35</u>
Va[riation] 20°42'E

Descend
40.00 Set a basalt stone . . . for 1/4 sec[tion] cor[ner] from which
A pine 12 in[che]s dia[meter] . . . .
A pine 4 in[che]s dia[meter] . . . .
5[ ] On side hill facing East

52.00 **Tucannon Creek 50 l[in]ks wide flows N.** I cross by offset East 1.00 ch[ai]ns thence on said offset
70.00 Leave bottom. I here meander 1 ch[ai]n W on line ascend
80.00 Set basalt rock . . . for cor[ner] to sec[tion]s 26, 27, 34 and 35 from which
A pine tree 40 in[che]s dia[meter] . . . .
No other trees convenient
Land on Tucannon bottom level.
Soil 1st and 2d rate. Timber pine and balm.
Underbrush red and white willow, maple, indian arrow, thorn, roses and cherry
Plenty of beaver and otter sign

East on a true line on S b[od]y of sec[tion] 35
Va[riation] 21 °E

Tucannon bottom open pine timber
7.00 **Tucannon Creek flows N30 °W 50 l[in]ks wide**
14.30 Leave bottom and ascend
16.50 A pine tree 30 inches dia[meter]
20.50 Summit of spur bears N60 °E and S60 °W
Still ascending side of spur faces SE
40.00 Set basalt rock . . . for 1/4 sec[tion] cor[ner] as per instructions
54.60 Summit of ridge 800 feet high sharp and rocky bears N and S
Va[riation] 21 °East
Descend very steep
74.75 Cummings Creek 75 l[in]ks wide flows N30 °W
77.00 Ascend rocky spur precipitously
79.00 A ledge of basalt rock
80.00 Set a post for corner to sections 35, 36, 1 and 2 from which
A pine tree 10 in[che]s dia[meter] . . . .
No other trees convenient
Land rocky, rough and mountainous
Soil 3d rate. **Timber pine, fir, tamarack and balm on Tucannon and Cummings Creek.** Undergrowth willow, service, goose and raspberries, vine bark and rose.

General Description

This Township is cut by the Tucannon Creek running through it in a North Westerly direction and is without doubt the roughest Township surveyed East of the Cascade Mountains. At present it contains some 19 or 20 settlers mostly confined to the North West corner; the North East corner also contains some good arable land, but is not as yet settled owing to the lack of living water

the soil is good being a black loam and is covered with excellent bunch grass which at this date is growing finely and the stock running here are in fine condition. **The Tucannon furnishes some desirable locations for stock ranches but is too narrow to make farming pay - there is good lumber here consisting of balm, pine, birch and arrow.**

There is water power enough here to run all the machinery necessary for a heavy population.

There is curious Indian tradition in reference to this part of the country. They say that the White man's God came to make the country and having furnished the Spokane and Palouse he turned his attention to the Tucannon, having formed the ridges and spurs as they are now seen - he commenced to sifting loam and sand and had leveled that portion between the Patakee and Alpona when they held a council and decided to stop here in order that they might have a hunting ground. They then collected in great numbers and so frightened him that he left his work unfinished.

The Township abounds in "flesh, fish and fowl", mountain trout, salmon, trout, and salmon are abundant at certain seasons of the year. Deer and Bear are plentiful and an experienced hunter never need want of meat. Grouse pheasant and Prairie Chickens are also numerous.

The grandeur of this Township must be seen to be appreciated. Its lofty mountains, tall hills and cool, clear, gushing streams are elements at once charming . Why people will drink the filth of the Mississippi Valley when so much good and healthy water is going to waste here is a wonder.

The geological formation is usually basaltic. I thought where I saw the immense depth of the Tuicannon (at least 1000 feet) that the rock formation would change but find no change save the outcropping of Volcanic Tufa which is seen at many places presenting an interesting Geological Problem.

No indications of Gold seekers or lead but some unknown local attractions exist here as well in Township 10N, R[ange] 40E which causes the variations of the needle to materially change. The timbered portion of this county are becoming valuable and although mountainous and very rough should be surveyed (Loehr 1872b).

Survey commenced October 7, 1872
Survey completed December 3, 1872

TOWNSHIP 9N, RANGE 41E, W.M.

N0°2'W on a random line bet[ween] sec[tion]s 2 and 3

40.00	Set temporary 1/4 sec[tion] cor[ner]
80.35	Intersect N b[oun]d[ar]y of T[ownshi]p 35 l[in]ks E of cor[ner]
	Thence I run
	S0°17'E on a true line bet[ween] sec[tion]s 2 and 3
	Bottom land, heavily timbered
17.08	**To edge of [Tucannon] river leave without crossing**
31.20	**[Tucannon] river, 50 l[in]ks wide course N from SW**
40.35	Set stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
	No other trees near
43.41	Chapman's picket fence, enter garden
46.39	Leave garden picket fence bears E and W
66.20	Leave bottom, ascend mountain
72.43	Big Gulch Creek, 5 l[in]ks wide course West, ascend
80.35	The cor[ner] of sec[tion]s 2, 3, 10 and 11
	Land 68.20 ch[ain]s, level, remainder mountainous
	Soil, bottom level 1st rate, remainder 3d rate
	Timber, red fir and pine
	Mountainous or heavily timbered land 80.35 ch[ain]s

East on random line bet[ween] sec[tion]s 3 and 10

40.00	Set temporary 1/4 sec[tion] cor[ner]
79.50	Intersect sec[tion] line at cor[ner]
	Thence I run
	West on a true line bet[ween] sec[tion]s 3 and 10
	Descend
5.00	**[Tucannon] river 50 l[in]ks wide, course N30°E**
9.90	Enter plowed ground
12.10	Leave plowed ground
15.25	Creek 6 l[in]ks wide course N
16.05	Swamp 40 l[in]ks wide
17.40	Plowed ground
18.33	Leave plowed ground
19.43	Fence bears N and S
20.20	County road, bears N and S
22.50	Begin steep ascent
39.45	Summit of sharp cliff, bears NW and SE
39.75	Set stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
	A pine 15 in[ches] dia[meter] . . . .
53.50	Ravine, course SE ascend

66.50 Leave timber
78.43 Summit bears S30◦W and N30◦E, elevation 1500 feet
79.50 The corner to sec[tion]s 3, 4, 9 and 10
Land, mountainous and generally timbered
Soil on mountain 3rd rate, on bottom 1st rate
Timber pine and red fir
Mountainous or heavily timbered land 57.00 ch[ain]s

East on a random line bet[ween] sec[tion]s 10 and 15

Descend toward [Tucannon]
40.00 Set temporary corner for 1/4 sec[tion] cor[ner]
79.90 Intersect sec[tion] line at corner
Thence I run
West on true line bet[ween] sec[tion]s 10 and 15
Descend steep mountainside
27.00 Foot of mountain
31.89 Fence, bears N and S
34.20 **[Tucannon] 65 l[in]ks wide, course N20◦E**
36.00 **Fork of [Tucannon] 60 l[in]ks wide N20◦E**
36.80 Fence bears N and S
37.00 Mill road bears N and S
37.30 Fence bears N and S
38.41 Fence bears N and S
39.12 County road bears N and S
39.85 Set stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . .
A pine 48 in[che]s diam[eter] . . . .
A pine 20 in[che]s diam[eter] . . . .
40.70 Leave bottom, ascend mountain through heavy timber
79.70 Corner of sec[tion]s 9, 10, 15 and 16
Land mountainous and timbered
Soil, bottom land, 1st rate, mountainous 3rd rate
Timber pine and red fir
Mountainous or heavily timbered land 79.70 ch[ain]s

North, 0◦3'W bet[ween] sec[tion]s 15 and 16

Descend through dense timber
4.00 Foot of mountain
5.00 **[Tucannon] 50 l[in]ks wide, course NE**
19.00 Leave bottom, begin ascent
40.00 Set stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
A pine 36 in[che]s diam[eter] . . . .
No other trees convenient

58.05 Summit, descend NE and SW
69.42 Ravine, course E, ascend
80.00 Set stone . . . for cor[ner] to sec[tion]s 9, 10, 15 and 16 . . . .
A pine 28 in[che]s diam[eter] . . . .
Land mountainous and timbered
Soil, mountain loam, 1st rate
Timber, pine, fir, and tamarac
Mountainous or heavily timbered land 80 ch[ain]s

East on a random line bet[ween] sec[tion]s 16 and 21

40.00 Set temporary 1/4 sec[tion] cor[ner]
79.74 Intersect section at cor[ner]
Thence I run
West on true line bet[ween] sec[tion]s 16 and 21
2.40 [Tucannon] valley, enter timber
9.11 **[Tucannon] river 50 l[in]ks wide, course N20◦E**
12.20 County road, bears N and S
16.20 Leave valley, ascend
34.40 Summit, bears N and S
39.89 Set a stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
A pine 30 in[che]s in diam[eter] . . . .
No other trees near
45.00 Ravine, course S70◦E, ascend ravine
51.50 Ascend mountain
79.74 The corner of 16, 17, 20 and 21
Land , on bottom 1st rate, on mountain 3rd rate
Soil, on bottom 1st rate, on mountain 3rd rate
Timber, pine, fir, and tamarac
Mountainous or heavily timbered land 79.74 ch[ain]s

N0◦4'W bet[ween] sec[tion]s 20 and 21

Descend through heavy timber
3.50 Enter bottom land
18.20 County road bears E and W
19.25 **[Tucannon] N60◦E, 50 l[in]ks wide**
20.25 Begin steep ascent
36.00 Summit bears E and W. Descend
37.25 Creek 3 l[in]ks wide course E ascend
40.00 Mark cropping of bed rock . . . .
A pine 30 in[che]s diam[eter] . . . .
A pine 30 in[che]s diam[eter] . . . .
Continue steep ascent, scattering pines

64.00 Summit of ridge bears NW and SE, elevation 1500 feet, descend gradually along side of ridge
80.00 Set red fir post on side of hill facing W in mound of stone . . . .
A pine 24 in[che]s diam[eter] . . . .
A pine 8 in[che]s diam[eter] . . . .
A red fir 14 in[che]s diam[eter] . . . .
A pine 8 in[che]s diam[eter] . . . .
Land mountainous and heavily timbered
Soil - mountain loam 3rd rate
Timber - pine, fir and Tamarack
Mountainous and heavily timbered land 80.00 ch[ain]s

East on a random line bet[ween] sec[tion]s 20 and 29

40.00 Set temporary 1/4 sec[tion] cor[ner]
79.58 Intersect sec[tion] line 30 l[in]ks N of cor[ner] of sec[tion]s 20, 21, 28 and 29
Thence I run
N89°49'W on a true line bet[ween] sec[tion]s 20 and 29
Descend through dense timber
6.22 Fence bears N and S
10.70 [Tucannon] valley
17.97 **[Tucannon] river 10 l[in]ks wide, course N**
39.79 Set a stone . . . for 1/4 sec[tion] cor[ner] . . . .
A pine 24 in[che]s diam[eter] . . . .
No other trees near
56.00 Summit bears NW and SE
63.50 Descend
79.58 Cor[ner] of sec[tion]s 19, 20, 29 and 30
Land mountainous and heavily timbered
Soil mountain loam, 1st and 3d rate
Timber, pine, fir and tamarack
Mountainous or heavily timbered land 79.58 ch[ain]s

N0°5'W bet[ween] sec[tion]s 29 and 30

Ascend, scattering pines
22.50 Summit, 1500 feet high, bears NW and SE, descend
40.00 Made cor[ner] on a bed rock cropping . . . for 1/4 sec[tion] cor[ner] . . . .
A pine 30 in[che]s diam[eter] . . . .
No other trees near
42.80 **[Tucannon] river, 60 l[in]ks wide, course N80°E**
Enter Patrick's meadow

48.92 Patrick's house
53.60 Leave bottom, ascend
63.50 Summit bears E and W
71.50 Creek 5 l[in]ks wide, course E
80.00 Set a stone . . . in mound of stone for cor[ner] of sec[tion]s 19, 20, 29 and 30 . . . .
A pine 36 in[che]s diam[eter] . . . .
A pine 14 in[che]s diam[eter] . . . .
No other trees near
Land mountainous and heavilt timbered
Soil mountain loam 3rd rate
Timber, pine, fir, and tamarack
Mountainous or heavily timbered land 80.00 ch[ain]s

West bet[ween] sec[tion]s 30 and 31 on a random line

40.00 Set temporary 1/4 sec[tion] cor[ner]
89.80 Intersect T[ownshi]p line 20 l[in]ks S of cor[ner] of sec[tion]s 25, 30, 31 and 36
Thence I run
S89∘52'E on a true line bet[ween] sec[tion]s 30 and 31
Ascent steep and barren
19.75 Summit 1500 feet high bears NE and SW, descend
23.40 Fence NE and SW
47.80 Set a stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
A red fir 14 in[che]s diam[eter] . . . .
A pine 40 in[che]s diam[eter] . . . .
52.10 Cow Gulch Creek 10 l[in]ks wide course N, ascend
58.30 Summit bears N and S, descend
65.60 **[Tucannon] river, 60 l[in]ks wide, course N**
65.80 Fence N and S
70.10 Leave bottom, ascend
87.80 Cor[ner] of sec[tion]s 29, 30, 31 and 32
Land mountainous and heavily timbered
Soil, mountain loam 1st, 2nd, and 3rd rate
Timber pine, fir and tamarack
Mountainous and heavily timbered land 87.80 ch[ain]s

Survey between sections 31 and 32 [not available]

West bet[ween] sec[tion]s 5 and 32

Along side of mountain facing S
15.00 Begin steep descent toward [Tucannon]

40.00 Set stone . . . in mound of stone for 1/4 sec[tion] cor[ner] . . . .
A pine 20 in[che]s diam[eter] . . . .
47.00 Enter [Tucannon] bottom
51.50 **[Tucannon] river 550 l[in]ks wide, caused by beaver dam, course North**
57.00 Leave river and bottom, ascend
80.00 Summit set stone . . . for corner of sec[tion]s 5, 6, 31 and 32 . . . .
A pine 5 in[che]s diam[eter] . . . .
A pine 14 in[che]s diam[eter] . . . .
A pine 20 in[che]s diam[eter] . . . .
No other tree convenient
Land, mountainous except in valley where it is nearly level
Soil, 1st rate in valley, 3rd rate on mountain
Timber, pine, fir and tamarac
Mountainous or heavily timbered land 80.00 ch[ain]s

General Description

This township contains nearly every variety of land from plains to mountains, and the soil ranges from barren rocks to rich loam. The soil of the [Tucannon] valley is generally rich black loam, capable of producing abundant crops without irrigation. The soil of the high plateau is a rich loam, capable of producing abundant crops. The soil on the north slopes of ridges and mountains is generally a sand loam and on the south slopes very rocky, but produces good bunch grass pasture.

The [Tucannon] valley and the plateau are covered with a dense growth of pine, fir and tamarack, timber and underbrush. The south, rocky slopes are in some places mearly destitute of timber and brush.

There are several mining claims being worked occasionally, two or three tunnel[s] are several hundred feet in depth, with favorable reports given out, but no placer gold can be found in the creeks.

The township is well watered by the [Tucannon] river and by many brooks and springs of purest water.

There are 32 settlers in this township with permanent improvements as follows.

E.H. Chapman and E.J. Graden in sec[tion] 2
C.O. Davis and G.S. Watson in sec[tion] 3
M. Wood and R.A. McDowell in sec[tion] 4
Dora Wood in sec[tion] 5
Lee McCreary and C.W. Johnson and J.H. Floyd , sec[tion] 6
L.S. Richardson, Della Pate in sec[tion] 7
Richard Daniel and E. Maloney and Ward Pate, sec[tion] 8
Edward Johnson, J.M. Johnson, C.H. Waterman, Frank Waterman in sec[tion] 10

W.J. Dowling, E.J. Gowing in sec[tion] 15
Laura Pate in sec[tion] 17
W.J. Werliam, John Bender in sec[tion] 18
R.S. Magill in sec[tion] 20
G.W. Hixson, S.G. Bailey in sec[tion] 21
J.P. McKinsie, M.H. Patrick and G.W. Bailey in sec[tion] 29
B. Magill in sec[tion] 30

(Wilson 1902b)

TOWNSHIP 8N, RANGE 41E, W.M.

N0°04'W on a random line between sec[tion]s 4 and 5

40.00	Set temp[orary] 1/4 sec[tion] cor[ner]
78.83	Intersect N b[oun]d[ar]y of the t[ownshi]p, 23 l[in]ks W of the cor[ner] of sec[tions 4, 5, 32 and 33, heretofore described Thence I run S0°06'W, on a true line between sec[tion]s 4 and 5 Over mountainous land through scattered timber and undergrowth Descend, 865 f[ee]t to
38.50	Bottom of descent bears E and W Forest service trail bears E and W. Enter river bottom land
38.83	The point for the 1/4 sec[tion] cor[ner] falls on a basalt stone in place . . . . A red fir 13 in[che]s diam[eter] . . . . A pine 16 in[che]s diam[eter] . . . .
42.10	**Tucannon River, 30 l[in]ks wide, course S75°W.** Leave river bottom land and scattered timber and undergrowth, bears NW and SE. Ascend through dense timber and undergrowth
67.80	Top of spur slopes NW. Leave dense timber and undergrowth, enter scattered timber and undergrowth, bears NW and SE. Descend
78.83	The cor[ner] of sec[tion]s 4, 5, 8 and 9 Mountainous land; soil, coarse sand and clay loam, 2 to 6 in[che]s deep, dry on a stony clay subsoil; timber, fir, pine, tamarack and spruce; undergrowth, evergreen, thickets, honey laurel, vine maple, alder, mountain mahogany, service and sevenbark

N 0°03'W on a random line between sec[tion]s 3 and 4

40.00	Set temp[orary] 1/4 sec[tion] cor[ner]
79.21	Intersect N b[oun]d[ar]y of the t[ownshi]p, 37 l[in]ks W of the cor[ner] of sec[tion]s 3, 4, 33 and 34, heretofore described Thence I run S0°13'W on a true line between sec[tion]s 3 and 4 Over mountainous land through scattered timber and undergrowth Ascend
6.30	Top of spur slopes S50°W. Descend
14.20	Bottom of dry draw, course S30°W. Ascend
27.20	Top of rocky spur slopes S45°W. Descend, 440 f[ee]t to
39.21	Set a basalt stone . . . . A pine 20 in[che]s diam[eter] . . . . A pine 24 in[che]s diam[eter] . . . .

Descend 250 f[ee]t to

49.00 Forest Service trail bears N80°W and S80°E
Descend 30 f[ee]t to

49.90 Enter river bottom, leave scattered timber and undergrowth, bears N80°W and S80°E
Across bottom land

55.00 **Channel of Tucannon River, 50 l[in]ks wide, course N80°W**

56.10 **Channel of Tucannon River, 15 l[in]ks wide, course N80°W**

56.50 Leave bottom land, enter dense timber and undergrowth, bears NW and SE. Ascend

72.70 Top of spur slopes S70°E. Descend

76.50 Bottom of ravine, brook 1 l[in]k wide, course N60°E
Ascend 75 f[ee]t to

79.21 The cor[ner] of sec[tion]s 3, 4, 9 and 10
Mountainous land; soil, course sand and clay loam, 3 to 18 in[che]s, deep, dry on a stony clay subsoil; timber, fir, pine, tamarack and spruce; undergrowth, evergreen thickets, vine maple, alder, honey laurel, willow, huckleberry, service and sevenbark

N89°57'E on a random line between sec[tion]s 3 and 10

40.00 Set temp[orary] 1/4 sec[tion] cor[ner]

79.98 Intersect N and S line, 12 l[in]ks N of the cor[ner] of sec[tion]s 2, 3, 10 and 11
Thence I run
N89°58'W on a true line between sec[tion]s 3 and 10
Over mountainous land through heavy timber and scattered undergrowth

7.50 **Tucannon River, 25 l[in]ks wide, course N70°W**

12.40 Leave river bottom, enter dense timber and undergrowth, bears NW and SE. Ascend

29.60 Top of spur slopes N. Descend

37.00 Bottom of ravine, brook 6 l[in]ks wide, course N. Ascend

39.99 Set a basalt stone . . . .
A white fir 24 in[che]s diam[eter] . . . .
A tamarack 36 in[che]s diam[eter] . . . .

64.60 Top of spur slopes NE. Descend

79.98 The cor[ner] of sec[tion]s 3, 4, 9 and 10
Mountainous land; soil, coarse sand and clay loam, 3 to 10 in[che]s deep, moist on a stony clay subsoil; timber, fir, pine, tamarack and spruce; undergrowth, evergreen thickets, honey laurel, vine maple, alder, service and sevenbark

N0°02'W between sec[tion]s 10 and 11

Over mountatinous land through scattered timber and undergrowth
Ascend

7.30 Top of spur slopes NE. Descend

13.90 Bottom of dry ravine, course N80°E. Ascend

20.75 Top of spur slopes N50°E. Descend

30.40 Bottom of dry draw, course N50°E. Ascend

33.10 Top of spur slopes N60°E. Descend gradual slope

40.00 Set a basalt stone . . . .
A pine 18 in[che]s diam[eter] . . . .
A fir 7 in[che]s diam[eter] . . . .

41.80 Descend steep slope through dense undergrowth and scattered timber, along E side of ravine

51.40 Descend over cliff 30 f[ee]t high

71.40 Bottom of ravine, creek 3 l[in]ks wide, course N10°E

73.00 Foot of slope, leave scattered timber and dense undergrowth, bears E and W. Across river bottom land

74.50 **Tucannon River, 30 l[in]ks wide, course N70°W**

77.50 Leave river bottom land, enter heavy timber and scattered undergrowth, bears E and W. Ascend

80.00 Set a basalt stone . . . .
A fir 24 in[che]s diam[eter] . . . .
A yellow pine 40 in[che]s diam[eter] . . . .
A yellow pine 18 in[che]s diam[eter] . . . .
A yellow pine 30 in[che]s diam[eter] . . . .
Mountainous land; soil, coarse sand and clay loam, 3 to 18 in[che]s deep, moist on a stony clay subsoil; timber, fir, pine, tamarack and spruce; undergrowth, evergreen thickets, honey laurel, alder, vine maple, wild cherry, willow, huckleberry, service and sevenbark

N0°01'W between sec[tion]s 11 and 12

Over mountainous land through dense timber and undergrowth
Ascend

15.50 Top of spur slopes NE. Descend

40.00 Set a basalt stone . . . .
A spruce 10 in[che]s diam[eter] . . . .
A white fir 7 in[che]s diam[eter] . . . .

54.70 Bottom of ravine, brook 9 l[in]ks wide, course N35°E
Ascend

57.00 Top of spur slopes NE. Descend

66.10 **Tucannon River, 25 l[in]ks wide, course W.** Leave dense timber

and undergrowth, bears E and W. Ascend
80.00 The point for the sec[tion] cor[ner] falls on a ledge of rock . . . .
A pine 11 in[che]s diam[eter] . . . .
A pine 24 in[che]s diam[eter] . . . .
A pine 25 in[che]s diam[eter] . . . .
A pine 10 in[che]s diam[eter] . . . .
Mountainous land; soil, coarse sand and clay loam, 6 to 10 in[che]s deep, moist on a stony clay subsoil; timber, fir, pine and tamarack; undergrowth, evergreen thickets, honey laurel, vine maple, alder, huckleberry, service and sevenbark

General Description

The surface of this t[ownshi]p consists of high ridges and spurs with deep ravines and gulches. **The SE quarter drains south to the Salmon River and the remainder drains to the Tucannon River which flows through the northeast part of the t[ownshi]p.** Water is to be found abundantly in numerous springs and creeks flowing in the bottom of ravines and gulches. **The Tucannon River is a stream averaging about 50 links in width and three or four feet in depth.** Panjab Creek, which flows through the western half of the t[ownshi]p, averages about 25 l[in]ks in width and one foot in depth. **The waters are clear and cold and abound in fish.**

The soil in the bottoms of ravines and gulches is a dark loam of sand and clay, richened by decomposed organic matter, of from 12 to 24 in[che]s deep. The soil on the slopes and tops of ridges and spurs is a light sand and clay loam, comparatively shallow and very coarse, bedrock being near the surface in some places. On the more gentle slopes, a rich, moist clay loam in to be found, which would be quite productive. Along the river and Panjab creek is a broad strip of bottom land, in many places the timber is quite open, The soil is a fine light sandy loam, 12 to 36 in[che]s deep. The subsoil is a stiff, stony clay, which holds moisture for a considerable length of time. Decomposing granite and basalt, and decomposed organic matter, is the base of the soil.

The North and east slopes are covered with a dense growth of timber and undergrowth, generally, which on the south and west slopes is more scattered. The timber consists of red-fir, white-fir, yellow-pine, black-pine, spruce, tamarack and yew, but has no commercial value. There are many varieties of undergrowth, among which are evergreen thickets, alder, vine maple, willow, huckleberry, honey laurel, mountain mahogany, service and sevenbark. A comparatively good growth of grass is to be found over the surface, and on some of the western slopes there is a good growth of bunch grass. Sheep and cattle find some good grazing in the t[ownshi]p.

Frank Lotzon has settled on the N 1/2 of the NW 1/4, sec[tion] 5, where his cabin and barns with a small garden producing many vegetables, are

situated. An oat and hay field of about 10 acres lies in both t[ownshi]ps, and good crops are secured from this field.

P. McCleary has a small claim in sec[tion]s 7 and 8, where some attempt has been made to till the land. His house and barn are in sec[tion] 8

There are several cabins scattered througout the t[wownshi]p, which are used as headquarters for cattle and sheep men.

There is some indication of gold and silver bearing ore in sec[tion] 7, and some development work has been done. There is also evidence of small patches of iron deposits scattered over the t[ownshi]p

Many small patches of land available for agricultural purposes, are to be found throughout the t[ownshi]p, especially along the bottoms of ravines and gulches, if cleared of timber and undergrowth. Along the river bottom is good agricultural land which would require only little clearing (Collins and Carey 1915b).

John G. Collins
U.S. Transitman
Clyde N. Carey
U.S. Transitman

August 29, 1915

CONCLUSIONS

Historical records confirm that the Tucannon River in the nineteenth century possessed abundant, clear, cold water. The river was the habitat for trout and salmon. In 1864 a surveyor noted "Both streams [the Tucannon and Pataha] are filled with Mountain Trout and Salmon 'run up' the Tucannon whither the Snake river Indians come in the fall to fish." Presumably the surveyor referred to the Nez Perce who lived along the lower Snake River (House 1864f). Working far back in the Blue Mountains surveyors Collins and Carey found the Tucannon "clear and cold," a stream and its tributaries which "abound in fish" (Collins and Carey 1915b).

The conditions which contributed to the thriving habitat for fish in the Tucannon were clearly the product of the forest glens and crystal clear headwaters for the stream in the Blue Mountains. This setting, however, was sustained by the heavily vegetated stream corridor where cottonwoods, willows, alder, crabapple, and choke cherry as well as rose, gooseberry, and sumac constituted a highly important environmental setting. These species served as an important buffer and source of shade in those miles where the Tucannon cut from the Blues through the ancient basalts of the Columbia Plateau toward its confluence with the Snake.

The advent of settlement in the 1860s and rapid spread of both livestock raising and upland dry-farming in the latter three decades of the nineteenth century set the stage for changes in the environment. Both contributed to the potentials for erosion as well as the cutting of timber along the streams. In an environment short of wood, the cottonwoods and other trees were an attractive and easily accessible source of firewood for settlers. The conifers on the upper reaches of the Tucannon beckoned to loggers and lumber men. Although mines found

on its headwaters temporarily held the promise of gold, silver, or iron production, none proved profitable. The Tucannon lacked placer deposits and was thus spared the impacts of extensive mining in its old stream terraces and gravel bars.

The Tucannon was a stream of excellent quality, fine fish habitat, and substantial runs. It served the native population into the 1860s and elicted remarkable comments of endorsement from the cadastral surveyors who examined its banks during the subdivisions of the townships in southeastern Washington.

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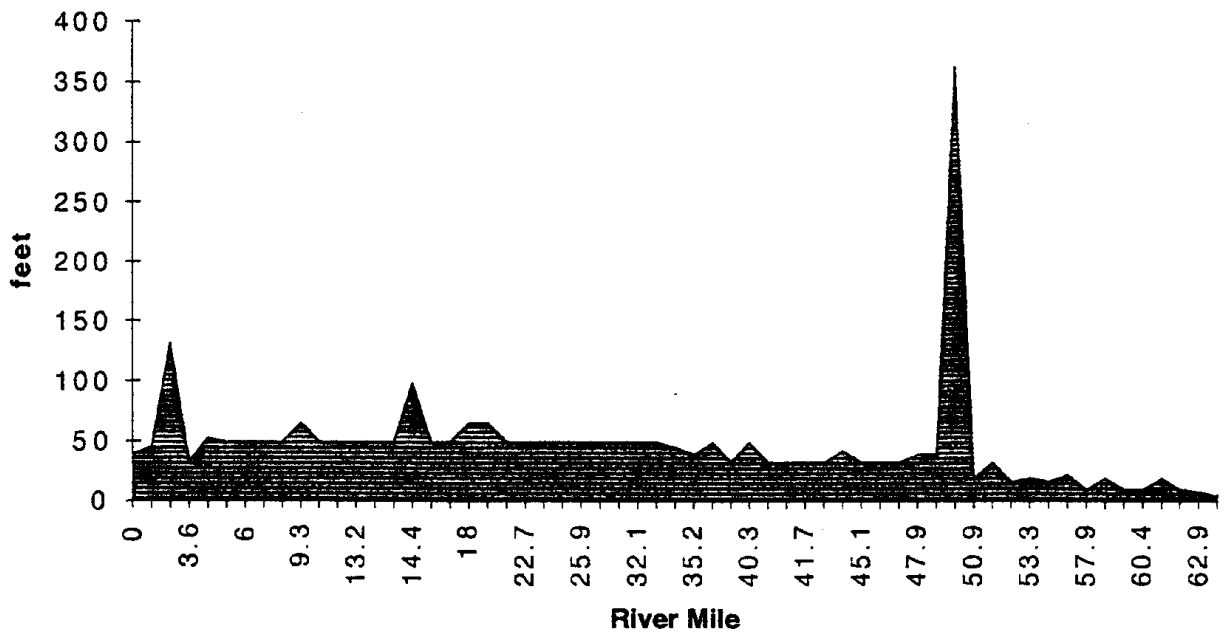
Tucannon River Width



Township	Sections	River Mile	Width (lks)	Width (feet)
				1 lk = 0.66 ft.
T 12N, R 37E	3,10	0	60	40
	10,11	1.7	70	46
	11,14	2.9	200	132
	13,14	3.6	50	33
	13,24	4.7	80	53
	E 24	4.9	75	50
T 12N, R 38E	19,20	6	75	50
	20,21	7.1	75	50
	21,22	8.2	75	50
	22,23	9.3	100	66
	23,24	10.4	75	50
T 12N, R 39E	19,30	12.3	75	50
	29,30	13.2	75	50
	29,30	13.3	75	50
	29,30	13.5	75	50
	29,32	14.4	150	99
	32,33	15.2	75	50
	33,34	16.5	75	50
T 11N, R 39E	2,3	18	100	66
	1,2	19.1	100	66
T 11N, R 40E	5,8	21.9	75	50
	8,9	22.7	75	50
	9,10	23.9	75	50
	10,11	25.4	75	50
	11,14	25.9	75	50
	11,14	26.5	75	50
	11,12	26.6	75	50
T 11N, R 41E	30,31	32.1	75	50
	31,32	32.3	75	50
T 10N, R 41E	4,5	34.2	69	46
	4,9	35.2	60	40
	21,22	38.3	75	50
	22,27	39	50	33
	27,34	40.3	75	50
	34,35	40.4	50	33
	S 35	41.4	50	33
T 9N, R 41E	2,3	41.7	50	33
	3,10	42.5	50	33
	10,15	43.7	65	43
	15,16	45.1	50	33
	16,21	45.3	50	33
	21,20	46.5	50	33
	29,30	47.9	60	40
	30,31	48.6	60	40

	S 32	29.8	550	363
T 8N, R 41E	4,5	50.9	30	20
	3,4	52.1	50	33
	3,10	53.2	25	17
	10,11	53.3	30	20
	11,12	54.4	25	17
	7,18	56.6	35	23
	17,18	57.9	15	10
	16,17	59.1	30	20
	16,21	60.1	15	10
	21,22	60.4	15	10
	22,27	61.7	30	20
	26,27	62.6	15	10
	26,35	62.9	12	8
	35,36	63.8	6	4