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United States Department of the Interior National Park Service

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National Register of Historic Places Registration Form

NATIONAL REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Interior Grain Tramway
other names/site number N/A

2. Location

street & number Snake River Canyon; 1 to 2 miles north of Wawawai
city, town Pullman
state Washington code WA county Whitman code 075 zip code 99163

3. Classification

Ownership of Property: private (checked)
Category of Property: structure (checked)
Number of Resources within Property: Contributing (1, 9, 10), Noncontributing (0), Total (10)

Name of related multiple property listing: Grain Production in Eastern Washington
Number of contributing resources previously listed in the National Register: 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this nomination (checked) request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property (checked) meets ( ) does not meet the National Register criteria. ( ) See continuation sheet.
Signature of certifying official: [Signature]
Date: 7/28/88
Washington State Office of Archaeology and Historic Preservation

In my opinion, the property ( ) meets ( ) does not meet the National Register criteria. ( ) See continuation sheet.
Signature of commenting or other official:
Date:
State or Federal agency and bureau:

5. National Park Service Certification

I, hereby, certify that this property is:
[checked] entered in the National Register.
[ ] determined eligible for the National Register.
[ ] determined not eligible for the National Register.
[ ] removed from the National Register.
[ ] other, (explain:)
Signature of the Keeper: Patrick Andrews
Date of Action: 9/22/88

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**6. Function or Use**

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Historic Functions (enter categories from instructions)  
Agriculture: storage (grain conveyance  
facility)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Current Functions (enter categories from instructions)  
vacant/not in use  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**7. Description**

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Architectural Classification  
(enter categories from instructions)

Other: tramway  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Materials (enter categories from instructions)

foundation stone  
walls N/A  
\_\_\_\_\_  
roof N/A  
other timbers; steel cable  
\_\_\_\_\_  
\_\_\_\_\_

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**Describe present and historic physical appearance.**

Though abandoned and extensively deteriorated, the Interior tramway is the most complete and intact grain tramway remaining in Whitman County and eastern Washington. Located in the Snake River canyon one to two miles north of Wawawai, it conveyed sacks of wheat from the high Palouse hills down a steep ridgeline to the valley floor via a long steel cable strung on wooden towers. Remains of at least 27 towers are yet present on the rugged, wind-swept hillside. Eight towers still stand, but the others have collapsed or been razed. Situated at the top of the hills overlooking the deep river canyon is the upper terminal complex consisting of one standing structure and the scattered remains of at least five others. In total, the nominated property stretches over 5,000 feet from the river to the top of the tramway and consists of the tower corridor and upper terminal (one contiguous site area) and nine standing (contributing) structures.

The tramway and its setting are best viewed from the upper terminal. There, on what are referred to as "The Breaks," the rolling fields of grain end abruptly at the rim of the Snake River canyon. It is one of the most dramatic vistas in North America. Marching single file down the precipitous slopes to the river's edge are the rustic tramway towers, crude in their construction, diminutive in size and overwhelmed by the sweep of the landscape. It was via this quaint technological contraption that farmers overcame the 1600 foot vertical drop from their fields to the transportation outlets along the river below.

The Interior Grain Tramway operated from 1901 through 1938. It took its name from the Interior Warehouse Company, which acquired ownership shortly after the facility was completed. The tramway functioned much like a modern ski lift, but instead of skiers it hauled two-bushel wheat sacks weighing 130+ pounds each. A brakeman at the upper terminal controlled the rate at which the heavy sacks descended the steep hillside on the device. Warehouses at either end of the tram stored grain awaiting transportation. Remains of the warehouse and other associated structures are present at the upper terminal, but the facilities at the bottom of the tram have all disappeared. Completion of Lower Granite Dam in 1975 raised the river's water level about 90 feet, forcing relocation of the railroad grade uphill, and thus obliterating the Interior warehouse siding and probably one or more of the tram's lowest towers.

A contemporary observer wrote the following succinct description of the facility in its early years of operation:

The upper terminal [breaking device]...is a large cast-iron wheel, eight feet in diameter, supplied with a patent ratchet grip that the cable passes through, and a smooth, band-iron grip brake for regulating the speed of the cable. The lower

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terminal is constructed in the same manner. The farmers deliver their grain to the warehouse at the upper terminal, and the sacks are placed on the carriers and lowered on the cable to the house on the river.

The cable is run on a gravity basis, the loaded carriers pulling up the empty ones. The lower terminal is in the tower of a large warehouse at the foot of the bluff, and grain is conveyed in chutes from this tower, either to different sections of the warehouse or to the steamboats, as the case may be.

When working at full capacity, ten hours per day, this tramway puts down 200 tons of wheat. Regarding distance that grain is drawn to it, it may be said that practically all of the grain in a territory extending five miles out in three directions from the upper terminal is taken care of by it. The carriers on this cable are about 80 feet apart. There are 128 carriers on the cable, so that 64 are going down loaded, while 64 are going up empty.

This tramway has proved a great success, and saves the farmers a haul of from 10 to 15 miles over a rolling country to the nearest railroad station. There are about 50,000 sacks [100,000 bushels] of wheat put down to the river landing over this tramway each season. [George M. Gage, "The Bucket Tramway," Pacific Monthly, 12:149-150 (September 1904)].

The above assessment remained an accurate portrayal of the facility's operation throughout its 37 years of active use. At peak times in late summer or early autumn, perhaps as many as 15 people, including a cook, worked at the site. Moonshine from a still in a secluded wooded spot in the side canyon was available to help men get through the long day. Whitman County farmers using the facility included N.C. Myers and later Charles Vollmer (owners of the land at the upper yarding area), Lou and Chet Wayman, and others within six or eight miles of the canyon.

By 1938, however, the tramway became outmoded and was abandoned, after which time some of its features were razed or scavenged, mainly at the upper and lower terminals. The warehouse at the river's edge was torn down in 1940 and the site since has been inundated by the modern reservoir. (The Lower Granite Dam project also forced the relocation of the railroad grade to a higher elevation). During World War II, the Pullman Junior Chamber of Commerce spent a day salvaging metal from the tram for the war effort. They removed the large breaking wheel and other accessible metal parts.

Though the buildings at the upper terminal were razed or salvaged, the foundations and debris from all five structures (scale house, cookhouse, warehouse, storage platform, and brake house) still remain today. A cement foundation and some boards are remnants of the scale house, onto which wagons or trucks were driven and weighed. The cook shack has collapsed; the walls have fallen outward and the roof now rests directly on the floor. Nearby is a corroded cookstove and a trash dump of kitchen debris. The foundation of the large warehouse is situated in the middle of the yarding area, and a very badly decayed storage platform is located a short distance to the north.

At the brake house (or "head house"), practically all of the machinery has been hauled off and much of the building's razed wooden framework was dumped immediately to the east.

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Still intact, however, is a large wooden box-like structure filled with rocks and standing on a concrete foundation. This was the mounting for the braking device, but about all that remains of its machinery today are two pairs of 8 inch metal wheels, and a flat metal tongue and steel ring near the rear. A road exits to the northwest from the yarding area, but now is rutted and overgrown and soon disappears in a plowed field. (Today, the nearest roads are a mile or more away; the tramway is accessible only by foot).

The most impressive remnants, however, are the towers and steel cable extending down the nearly one-mile-long ridgeline to the river below. The main cable is a continuous loop, upwards of two miles in actual length. It still lies in the tramway right-of-way, with only the bottom-most section missing in the vicinity of the three lowest towers. Much of the cable remains suspended in the air on the small metal wheels at the ends of the tower arms; elsewhere it lies on the ground.

Carriers were attached to the cable by ca. 5 foot long metal shafts; wheat sacks were hauled on a metal and wood chair-like framework (or "buckets") fastened to the bottom end of each carrier arm. Many of the 128 original arms remain, but a number have been removed (particularly at either end of the tramway route accessible to salvagers). The cables and carrier arms now are rusted, but otherwise remain in fair condition. A second cable also is present on the ground along the lower portion of the tramway route; perhaps it was a worn-out cable that was replaced.

At least 27 wooden towers remain; most have collapsed, but eight of these rustic, hand-built structures still stand. The site where one or more additional towers might have stood has been obliterated by the dam reservoir and relocated railroad grade at the base of the hill. Some of the collapsed towers are fairly intact, whereas remnants of others are extensively scattered. In the tram's mid section, the cable and a number of towers appear to have simultaneously shifted and collapsed together, perhaps during a heavy snowfall or windstorm. Composed of boards and stout timbers, the towers varied in height from ca. 6 to 13 feet, depending upon the requirements of the terrain. In places, the loaded grain sacks barely cleared the ground. Towers were anchored or stood on platforms of stacked basalt boulders, which were readily available in this rocky, semi-arid canyon. The eight towers that remain standing are distributed along the length of the route, numbering from the bottom: the 1st, 4th, 13th, 15th, 17th, 22nd, and 23rd towers.

**8. Statement of Significance**

Certifying official has considered the significance of this property in relation to other properties:

nationally  statewide  locally

Applicable National Register Criteria  A  B  C  D

Criteria Considerations (Exceptions)  A  B  C  D  E  F  G

Areas of Significance (enter categories from instructions)

Agriculture  
Commerce  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Period of Significance

1901-1938  
\_\_\_\_\_  
\_\_\_\_\_

Significant Dates

N/A  
\_\_\_\_\_  
\_\_\_\_\_

Cultural Affiliation

N/A  
\_\_\_\_\_  
\_\_\_\_\_

Significant Person

N/A

Architect/Builder

Kuhn, Aaron, & Manning, Seymour

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Interior Grain Tramway is historically significant for its association with the development of grain conveyance mechanisms in the wheat belt of Eastern Washington, and is believed to be the best preserved grain tramway system still extant in the state. It meets the registration requirements for the property type (Grain Conveyance Systems) as established in the Grain Production in Eastern Washington Multiple Property Documentation Form in the following ways: although in ruinous condition, significant elements of the system remain, sufficient to convey the overall character of the system; it better represents these systems than do the remains of comparable systems elsewhere in Eastern Washington; and even in its ruinous condition, it is likely to yield significant information about the technology of grain conveyance.

At the turn of the century, several trams were built in the deep canyons of the Snake and Columbia rivers, which transect the high Columbia Plateau wheat country. For decades these conveying devices were used to haul grain to steamboat landings or railroad sidings, until obsolescence closed them down in the pre-World War II era. The Interior facility was especially successful, and, today it is the best remaining example of a tram in the Snake River country of southeast Washington and probably the entire state.

The tram is significant for its historical associations, since it played a central role in the development and history of grain transportation in the Wawawai/Union Flat wheat district of Whitman County. Furthermore, the facility's remnants, particularly the long cable and series of towers, now are exceptionally rare features. They clearly delineate the type of materials, method of construction, and mode of operation that characterized these very long, often spectacular, linear structures.

Local businessman and entrepreneur Aaron Kuhn, of Colfax, financed the construction of the tram. His migration to the Palouse country had been a long one in time and distance. Kuhn was born in Germany on January 25, 1857, and immigrated to America in 1873 at the age of sixteen. Lured by economic opportunity to the West, he successfully managed mercantile businesses in Salt Lake City, and later in Elko and Tuscarora, Nevada, before quitting that area in 1878. Via San Francisco, he proceeded on to Pierce, Idaho, where he operated a general store until 1883.

**9. Major Bibliographical References**

June Crithfield, Of Yesterday and the River, privately printed, 1964, pp. 53-56.  
George M. Gage, "The Bucket Tramway," Pacific Monthly, 12:149-150 (September 1904).  
"Aaron Kuhn," in History of the City of Spokane and Spokane Country, Washington, Vol. 2, S.J. Clarke Publishing Company, Spokane, 1912, pp. 282-283.  
D. W. Meinig, The Great Columbia Plain, University of Washington Press, Seattle, 1968, p. 435 fn.  
Keith Petersen and Mary E. Reed, "Tramways," Latah Legacy, (Latah County Historical Society, Idaho), Summer 1983:21-24.  
Pullman, USGS quad map, 1910 edition (scale, 1:125,000).  
Pullman Herald (Pullman, Washington), April 27, 1901; June 29, 1901; and April 27, 1928.  
Matthew Root, The Interior Tramway: Wheat Transportation in the Snake River Canyon of Eastern Washington, unpublished ms., Pullman, ca. 1986.  
Spokesman Review (Spokane, Washington), April 23, 1901 and July 4, 1901.

See continuation sheet

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # \_\_\_\_\_
- recorded by Historic American Engineering Record # \_\_\_\_\_

Primary location of additional data:

- State historic preservation office
- Other State agency
- Federal agency
- Local government
- University
- Other

Specify repository: \_\_\_\_\_

**10. Geographical Data**

Acreege of property 8 acres

UTM References Top:

A 

1	1	4	7	1	1	5	0	5	1	6	7	4	4	0	
Zone	Easting	Northing													

Bottom:

B 

1	1	4	7	0	6	9	0	5	1	6	6	3	9	0	
Zone	Easting	Northing													

C 

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D 

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See continuation sheet

Verbal Boundary Description

The boundary is shown on the accompanying map (drawn to scale) and may be described as follows: Upper Terminal/Grain Loading Area: beginning from the northwest corner where a fence and fence gate meet at a right angle; continue 350 feet in an easterly direction along an existing fence line to another right angle turn in the fence (i.e., northeast corner); from the northeast corner continue due south 215 feet to a point 50 feet southeast  See continuation sheet

Boundary Justification

The Upper Terminal/Grain Loading Area boundaries include all of the remains of the head house, warehouse, storage platform, cookhouse, scale house, a portion of the abandoned road, and all the other scattered remnants of the upper yarding area. The connecting Tramway Route (Cable and Towers) boundaries enclose all segments of the cable and all 27 or more towers and tower remains from the upper terminal down to the Snake River. The  See continuation sheet

**11. Form Prepared By**

name/title Glen Lindeman, Historian  
organization Archaeological & Historical Service, EWU date March 31, 1988  
street & number Eastern Washington University telephone (509) 359-2239  
city or town Cheney state Washington zip code 99004

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From Idaho, he moved to Colfax and continued in the same line of work, while marrying Miss Leah Grostein of Lewiston, Idaho. Soon, Kuhn began purchasing valuable real estate in the burgeoning wheat (and fruit) belt of the Palouse country. As his holdings and financial resources expanded, Kuhn became one of the largest and best known wheat shippers in southeast Washington, handling as much as 1-1/2 million bushels a year.

While at the apex of his career as an influential grain merchant, Kuhn turned his attention to the Snake River breaks (located some 15 miles south of Colfax), where farmers had great difficulty getting grain wagons down the steep canyon walls to steamboat landings on the river. It was at this time that he decided to erect a cable tram below Wawawai. Grain hauled down the facility would be stored in a new river warehouse until shipped by sternwheeler to the railroad head at Riparia, Washington, located about 40 miles down the Snake. By early 1901, Kuhn forged ahead with planning and financing. Estimated cost was \$7,500 to \$8,000.

Regional newspapers reported that Kuhn was "preparing to revolutionize the wheat business of Pullman and vicinity" and in all probability would "divert from 125,000 to 250,000 bushels of wheat that ordinarily came to Pullman each year." Pullman stood about 10 miles northeast of the proposed tram site. The rolling hills of the Union Flat Creek country, located immediately north of this section of the Snake, were noted for "the finest quality of wheat grown in the Palouse country." In fact, some farmers had contemplated building a similar tramway system in this locality, but gave up the idea after Kuhn announced his project.

After finalizing construction plans, Kuhn took his family on a tour of Germany and Europe; they were scheduled to return in July, 1901. With Kuhn gone, Seymour Manning took charge. Manning was general manager of Kuhn's grain business in this part of the country. It was anticipated that the tram would be completed about the time Kuhn was to return from Europe.

On-site preparations began April 24, 1901, when Manning and William J. Roberts of the Washington Agricultural College (now Washington State University) travelled to Wawawai to make a survey for the cable tram. Roberts (holding degrees from the University of Oregon and the Massachusetts Institute of Technology) was Associate Professor of Mathematics and Civil Engineering at the new college in Pullman. When the survey was completed, construction pushed forward. Manning directed the installation of the cable and towers, as well as the building of a upper warehouse at the canyon rim and a 60 x 150 foot warehouse on the river.

By late June, the upper warehouse neared completion, but lumber for the river flathouse was still being hauled to the site. Nearly 10,000 feet of 7/8 inch cable arrived by railroad from the East, and was being hauled by a local teamster to the plateau rim. The cable was wound on two large spools, each holding 4,900 feet and weighing 6,000 pounds. The wagon could haul only one spool at a time.

An accident occurred July 2, when Manning's son-in-law, James Benton of Colfax, was seriously injured at the site by a heavy timber falling on him. A doctor was summoned by telephone from Pullman. Apparently no other injuries were incurred during construction of the facilities.

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The anticipated July 1st completion date probably was not met, but presumably the tram was finished before the fall threshing season. Kuhn had anticipated transporting 250,000 to 3000,000 bushels annually from the local district and from diversions from the Pullman market. This prospectus turned out to be too optimistic, and the facility actually hauled about 100,000 bushels annually during its early years of operation. Regardless, the tramway was a success and greatly appreciated by local farmers.

Aaron Kuhn apparently owned the tram for only a short time; in 1902 he disposed of most of his Colfax interests and relocated to Spokane. There he became influential in financial circles, playing a prominent role in real estate and railroad development as well as in banking at Spokane, Davenport, Garfield, and Sandpoint (Idaho). The tramway was acquired by the Balfour-Guthrie Company of Portland, Oregon, and by 1904 or earlier the Interior Warehouse Company was running the facility. It was in this period, of course, that the name "Interior" was first applied to the tramway and its riverfront flathouse. The Interior Warehouse Company was one of the large warehousing and milling businesses that operated an extensive chain of grain facilities in the Pacific Northwest. By 1910, in fact, Interior's network of 39 warehouses was the second largest in the Columbia Plateau, comprising nearly 10 percent of all grain storage installations in the region.

Sacked grain was loaded onto sternwheelers at the Interior landing for the 40-mile cruise downstream to the railway head at Riparia. The grain then was transferred to trains for shipment to the coast, where it was loaded (sometimes after milling) on cargo vessels for overseas shipment. Steamboats no longer stopped at Interior after about 1908, when the Camas Prairie Railroad was built along the north bank of the Snake River from Riparia to Lewiston, Idaho. After that time, wheat from the tram and warehouse was loaded directly on boxcars for the long haul to coastal ports.

With the information currently available, it appears impossible to give a reliable accounting of either the annual average of grain hauled, or the total amount handled, over the tramway's long years of use. Annual amounts, however, probably fluctuated somewhere around a reported 100,000 bushel average in 1904 to the 59,474 bushels hauled in 1927. By the 1920s and 1930s, trucks and improved roadways probably diverted some grain away from Interior to railroad sidings located elsewhere.

At any rate, the tram remained a boon to local farmers for nearly four decades, before obsolescence finally shut down the aging facility in 1938. Just prior to World War II, modern roads, vehicles, and storage elevators had finally revolutionized grain transportation in the Columbia Plateau by instituting the widespread practice of handling grain in bulk, rather than by the sack load. The sack-carrying Interior tramway system, of course, was not adaptable to the new bulk handling methods. It has remained abandoned ever since.

The surviving elements of the Interior tram provide the best opportunity for investigating the mechanical operations of similar linear grain conveyance systems in Washington State. Sufficient components remain intact or on the surface to offer a detailed overview of the system and yield information not included in historical documents. For example, information uncovered in the investigation of this site by researcher Matthew Root and the nomination preparers has provided new insights into the construction of the towers, carrier



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arms, cable, and sack-hauling cradles, misleadingly known as "buckets." In addition, the site preserves the course of the tram, the upper terminal yard breaking device, and artifacts associated with ancillary operations including the scale house, cook house, warehouse, storage platform, and break house.

In 1986, Washington State archaeology student Matthew Root conducted an on-site investigation, mapped the site with a transit and stadia rod, photographed structural remains, and catalogued surface artifacts, yielding technical information about the tram's operation "not available from written sources" (Root, p.36). Further on-site study could provide more information about the technology of grain conveyance systems from the period, the extent of the operations, and their impact on the region's agricultural economy.

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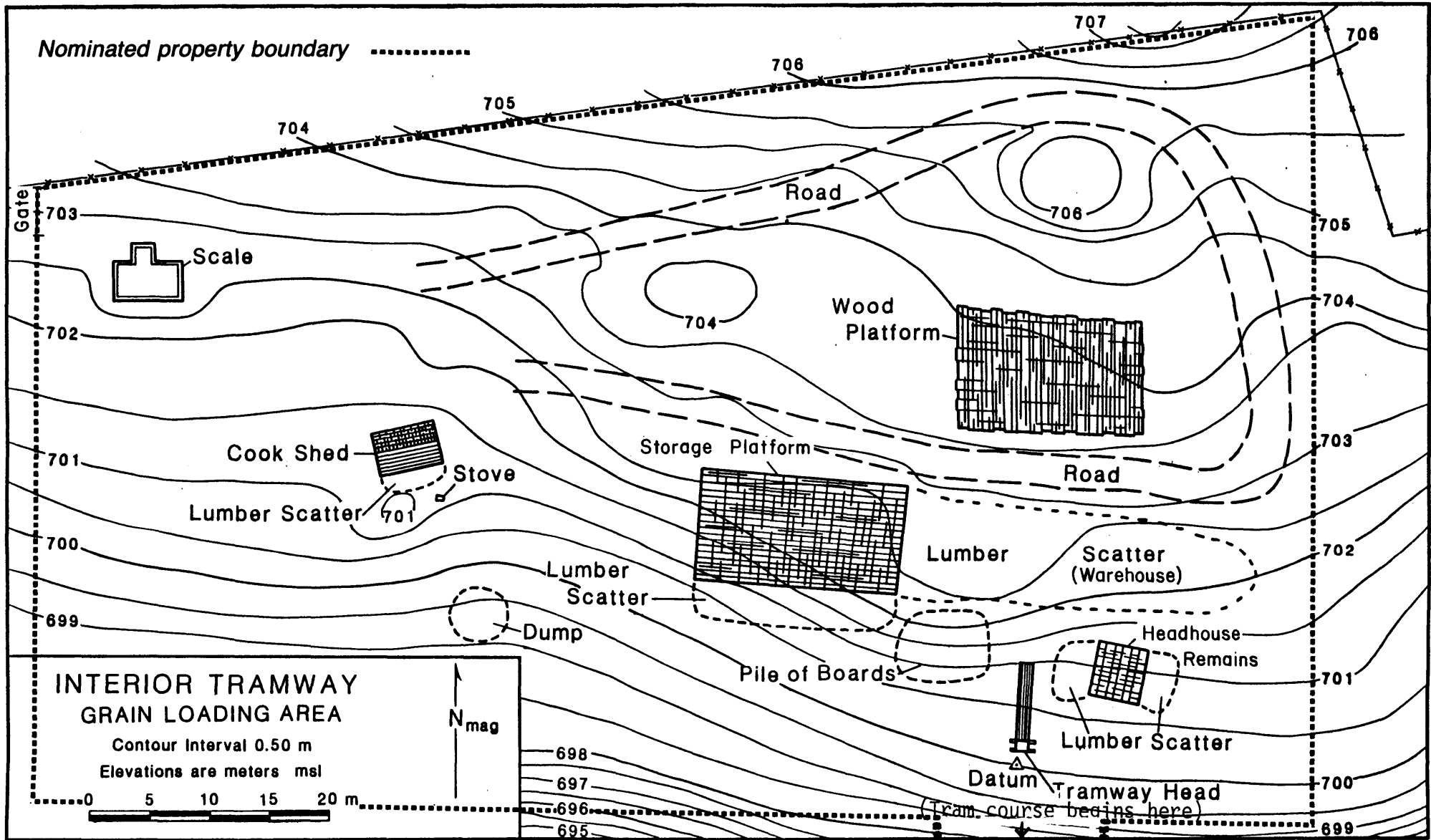
Verbal Boundary Description (continued)

of the head house remains (i.e., southeast corner); from the southeast corner continue 330 feet due west to the southwest corner; from the southwest corner continue 165 feet due north to the fence/fence gate junction at the northwest corner.

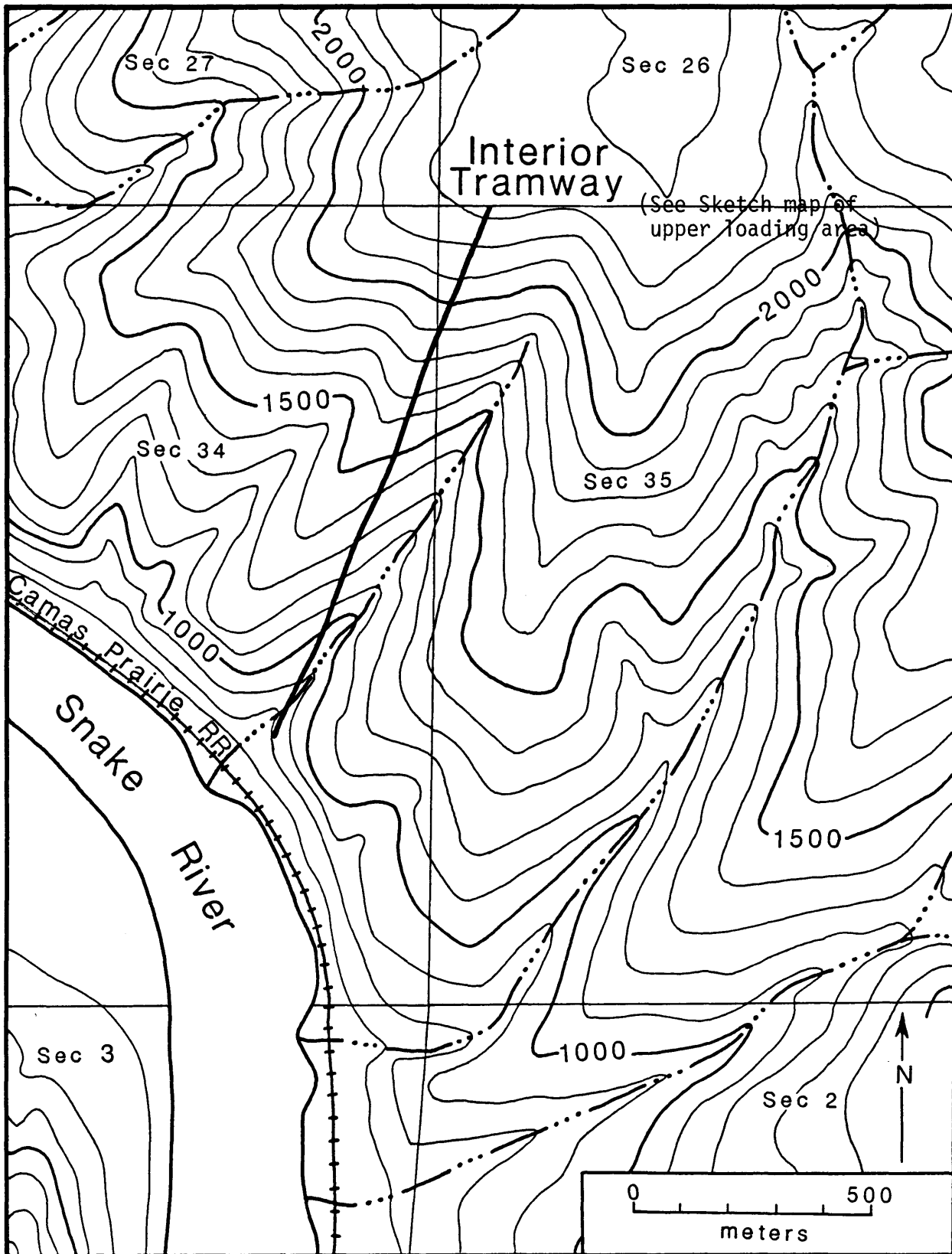
Tramway Route (Cable and Towers): a 75 foot wide corridor (i.e., 25 foot wide on the west or upslope side of the cable and towers, and 50 foot wide on the eastern or down slope side) extending 4,000 feet in a south/southwest direction from the upper terminal head house to a point 25 feet south of the last tower standing next to a small bay at river level. The upper terminal boundaries and the tramway corridor boundaries connect near the head house at the upper terminal.

Boundary Justification (continued)

corridor is purposely wider on the east side of the tramway (50 feet wide) than the west side (25 feet wide) because gravity has tended to scatter the remnants of fallen towers, carriers, and cable to the down-sloping east side.



Map courtesy of Matthew Root, Washington State University.



From: Root, "The Interior Tramway", Washington State University. See Bibliography

Figure 4. Topographic map of the Interior Tramway above the Snake River, Whitman County, Washington; elevations are in feet msl.

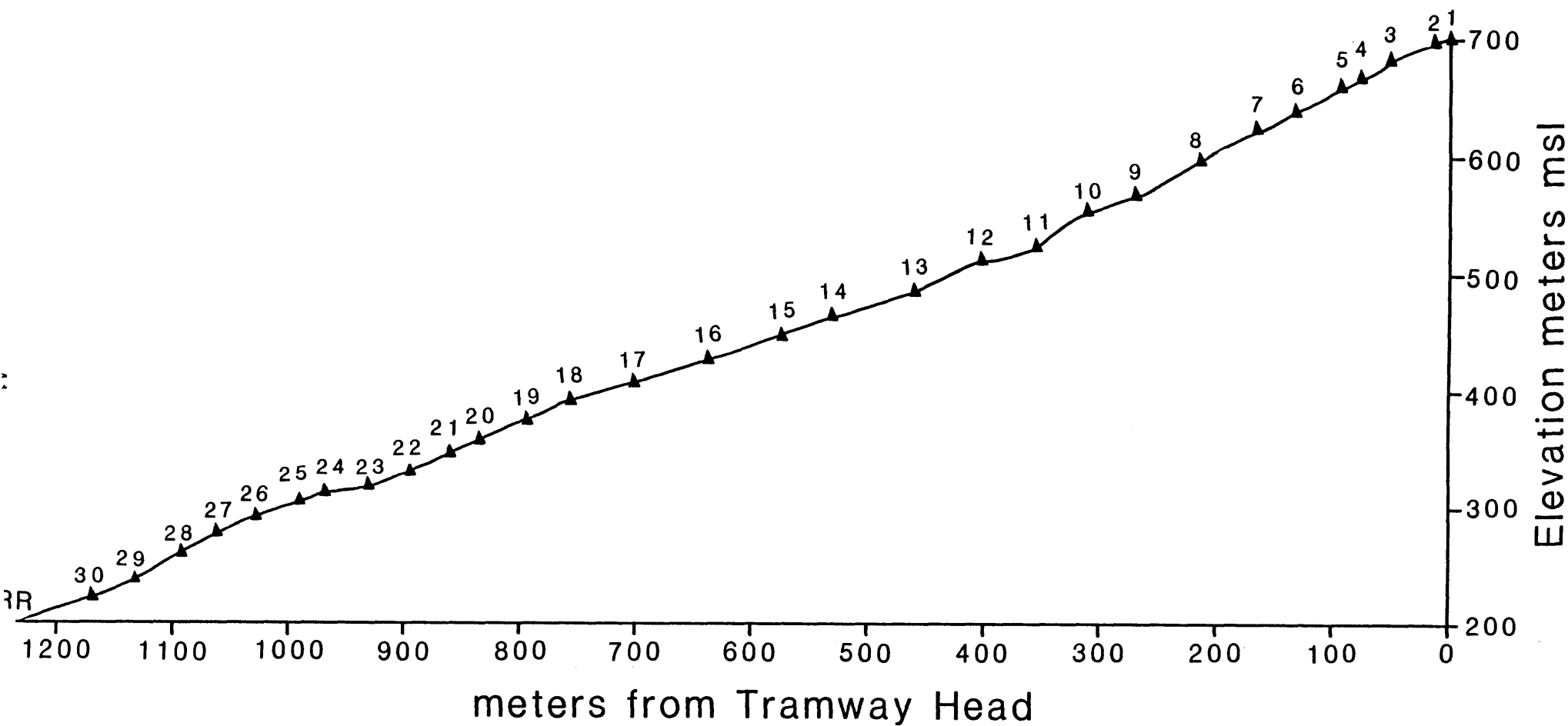


Figure 5. Approximate north-south profile of the course of the Interior Tramway down the Snake River Canyon.  
 From: Matthew Root, The Interior Tramway, Washington State University. See bibliography.