San Miguel County Historical Commission

March 8, 2024

Ms. Krystina Smith
USFS Norwood Ranger District
P.O. Box 388
1150 Forest Street
Norwood, CO 81423

RE: Support for Trail Expansion (#65616) in the Telluride Region
San Miguel County Historical Commission

Dear Ms. Smith,

The San Miguel County Historical Commission is writing to express our strong support for the Telluride Mountain Club's trails proposal, which is now under NEPA review with the USFS.

While all of the Telluride Mountain Club's new proposed trails are exciting, we'd like to bring special attention to the proposed Ilium Flume Trail, given its historic significance.

The old church camp in Ilium, as most of us know it, was originally the Ilium Hydroelectric Power Plant, built by L.L. Nunn's Telluride Power Company in 1900, shortly after the construction of his world-famous Ames plant. Built to expand and support the electrical grid that powered our region's mines, mills, and towns, the Ilium hydro plant was powered with water brought from Ames via a six-mile wooden flume (essentially built by hand). The Ilium plant and its flume were operational for nearly 60 years.

Heading out of Ames towards the Ilium plant, this six-mile flume was on a high trestle until it was able to hug the steep hills on the east side of Ilium valley. While that trestle is gone, much of the wooden flume still stands today, tucked away high in the aspens. The proposed Ilium Flume Trail would follow along its many remnants and allow trail users to immerse themselves not only in recreation but history. This new trail would be similar to the Galloping Goose Trail, which made use of the old Rio Grande Southern railroad grade. The County's Historical Commission would work closely with the Telluride Mountain Club and the USFS to ensure the placement of several historical interpretive panels along the trail so locals and visitors could learn its important place in our region's history.

We hope you understand the County Historical Commission's excitement for this truly unique trail. It would be one of a kind. We invite you to read our attached history report on the Ilium flume at your leisure, in order to understand and appreciate its history as we do.

Thank you for your time and consideration.

Ted Wilson, Chair
San Miguel County Historical Commission

HISTORY OF ILIUM FLUME

-In Support of Proposed Ilium Flume Trail-

Ilium, San Miguel County, Colorado

Research compiled by

San Miguel County Historical Commission

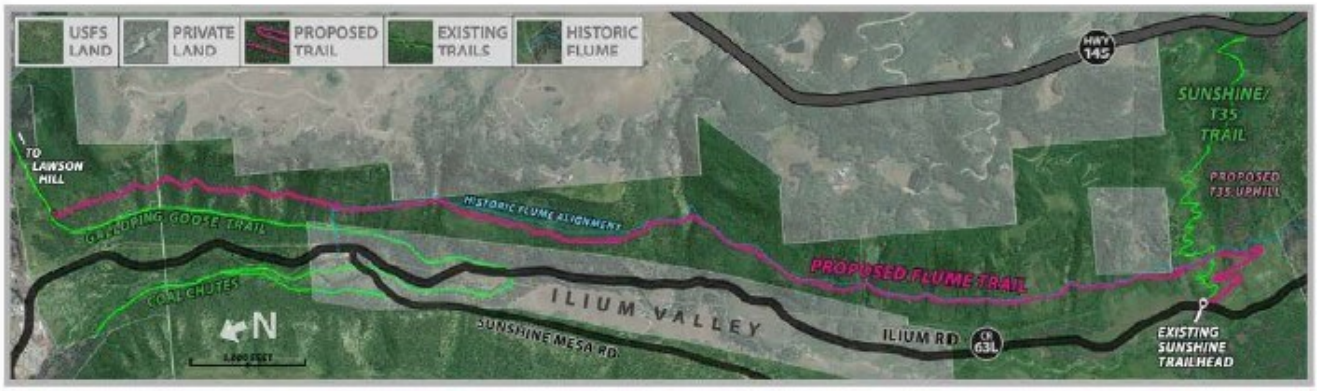
February 2023

TABLE OF CONTENTS

PROPOSED ILIUM FLUME TRAIL

Historic Ilium Flume Trail

4.8 MILES OF NEW TRAIL ALL ON U.S.F.S. LAND



Why: *Provide a singletrack connection between Sunshine Trail (T-35) and the Ilium section of the Galloping Goose. To create an improved singletrack experience connecting Prospect Trail, Magic Meadows Trail, and the Alta Lakes camping zone, to T-35/Sunshine Trail, to Lawson Hill (via the Galloping Goose) and the Valley Floor into town. Improve connectivity and safety by getting pedestrians off the Ilium Road. Offer trail users a glimpse of Telluride and Ilium Valley's history by utilizing interpretive signage and infrastructure where possible to showcase the historic Flume.*

Current: A historic flume currently exists for this alignment making it an easy connection to improve trail connectivity in the Ilium Valley. Sunshine Trail (T-35) ends on the road and leaves trail users with no options for a singletrack connection to the greater trail system. Some challenges with using the existing flume alignment include the possible preservation of historic structures still in place which would require some flexibility in the exact location of this trail. The USFS and San Miguel County are collaborators in wanting to make this trail a reality.

Proposed: Create a sustainable singletrack trail that utilizes the existing flume bench cut while also integrating in more interesting trail features where possible. This connector trail will improve the trail experience by connecting the Sunshine Trail (T-35) with the Galloping Goose and other trail system access points, Offering the opportunity for users to experience historic routes and to better understand the history of the unique Ilium Valley, this trail would require a collaborative partnership between the Telluride Mountain Club, San Miguel County Historical Commission, and the USFS,

Trail Length: 4.8 miles

Our understanding is that a proposed trail along the historic Ilium Flume has been kicked around for decades and that USFS asked Telluride Mountain Club (TMC) to keep it on their ongoing list of potential new trails. Members of the county historical commission explored sections of the flume with a USFS and TMC rep in Spring 2022.

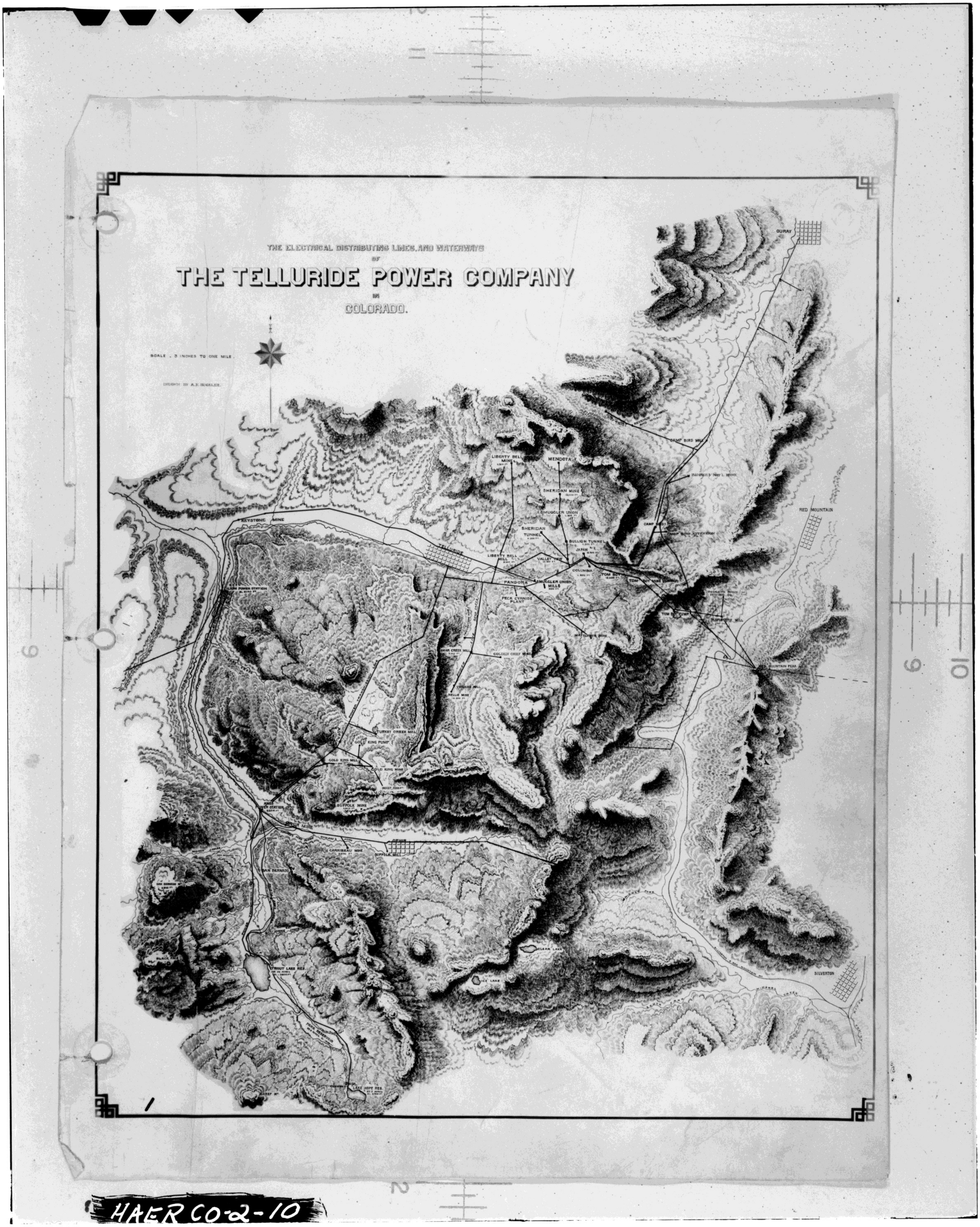
NOT JUST A TRAIL, BUT A HISTORIC SITE

In Support of the Proposed Ilium Flume Trail

The benefits of the proposed trail from a recreational standpoint are undeniable: a beautiful highline trail in Ilium Valley for hikers and one that allows mountain bikers to be in the woods, instead of on Ilium Road, between Sunshine Trail and Galloping Goose Trail.

From a historical perspective, the proposed trail is truly exciting. The entire trail is essentially a historic site: much of the wooden flume still exists, allowing visitors to hike and bike alongside it. Where the flume has been cleared or collapsed, the trail would still be on the flume's original path in most sections. Various viewpoints exist to allow for historic interpretive signage.

Much like the Galloping Goose Trail that runs along the old Rio Grande Southern railroad grade, the proposed Ilium Flume Trail grants that unique opportunity for visitors to immerse themselves in both recreation and history.


THE ELECTRICAL DISTRIBUTING LINES, AND WATERWAYS
OF
THE TELLURIDE POWER COMPANY
IN
COLORADO.
SCALE . 3 INCHES TO ONE MILE .
DRAWN BY A.K. BUCKLER.
OURAY
CAMP BIRD MINE
LIBERTY BELL MINE
MENDOTA
SHERIDAN MINE
SMUGGLER UNION
SHERIDAN TUNNEL
BULLION TUNNEL
KEYSTONE MINE
TELLURIDE
LIBERTY BELL MILL
PANDORA
SMUGGLER UNION MILLS
PECK CYANIDE PLANT
COLUMBIA
TOM BOY
RED MOUNTAIN
TURKEY CREEK MILL
KING PUMP
GOLD KING MILL
GOLD KING MINE
BUFFALO MINE
CARRIBEAU MINE
BUFFALO MILL
SILVERTON
HAER CO-2-10

ILIUM FLUME: TIMELINE

- **1898**: L.L. Nunn and his Telluride Power Company weren't the first to plan a hydroelectric power plant in Ilium. David Swickheimer and his partners planned to build their own plant near the bottom of Keystone Hill. However, the water rights from the fork of the San Miguel River running through Keystone Gorge were still held for placer mining there. Unable to win those water rights in court, the Swickheimer company turned to a different source: "The water is now to be taken from Howards Fork at the point where the Lake Fork joins it, or at a point just below the Ames power plant. From here it will be flumed to a point just below Vance Junction, at the foot of Keystone, where the plant is to be erected" (The San Miguel Examiner, April 23, 1898).

  But Nunn, having already built his revolutionary Ames power plant in 1890, quickly put a stop to it: "Considerable trouble is being experienced between the promotors of the new power plant at the foot of Keystone, and the owners of the present plant at Ames, regarding the use of water from Howard's Fork and Lake Fork near Ames" (The San Miguel Examiner, June 4, 1898).

  Thus ended Swickheimer's plans and soon after the Telluride Power Company began construction of their own flume and power plant in Ilium. (It's unclear if Nunn essentially took Swickheimer's Ilium vision for himself or if he had the same thought all along.)

- **1900:** Nunn's Telluride Power Company constructs the Ilium hydroelectric power plant and a six-mile flume to provide the water to run it. On December 31, Telluride's Daily Journal published a detailed account of the new venture: "Since [its] erection the Ames plant has generated and furnished power to drive the mills, light the towns, and the motive force to operate practically all the industries within the Telluride district … The past season has witnessed an enlarging of the plant to double its former capacity … The construction of this new and additional [Ilium] plant has practically consumed the entire summer, its completion being materially delayed by the failure of the lumber companies to carry out their contracts and deliver the lumber for the [Ilium] flume in August and September instead of putting it on the ground in November and December, when short days and cold, stormy weather made progress very slow and extremely expensive. The work is within a few days of completion and the new plant will be in operation, generating and distributing power not later than January 20th, probably the 15th.

… The generating station of the new plant is located at Ilium, about half way from Telluride to Ames by the wagon road. The water for driving the dynamos is taken from the discharge flume from the Ames plant, which includes the full flow of both Lake and Howard's Forks, aggregating 3,000 cubic feet per minute. The flume conveying this water is six miles in length, constructed of California redwood, furnished by the Albion Lumber Company of San Francisco. The flume consumed 800,000 feet of lumber and cost $55,000 from the headgate to the pressure box.

From the pressure box to the water wheels the water is conveyed by pipe of heavy boiler steel, 32 inches in diameter, manufactured by the Wm. B. Pollock company, of Youngstown, Ohio, and costing in place approximately $15,000. Through this pipe the water is conducted to Pelton water wheels, and discharge under a head of 503 feet, developing 2,000 horse power. There are two Pelton water wheels, 8 feet in diameter. They are from the Pelton Water Wheel company, of San Francisco, and cost in place, $12,000.

The generator is from the General Electrical company, Schenectady, NY. This piece of machinery represents as it stands an expense of $26,000.

The switchboard, like all the apparatus, is the most modern and best manufactured by the Wagner Electric Company, St. Louis. The transformers cost $15,000 and were made by the Converse company of Pittsburg, PA.

For transmitting of power generated at this plant, 60 miles of aluminum cable is being strung. This will cost in place on the poles, about $1,000 per mile.

… With the completion of the Ilium plant the service in this district will be materially extended, reaching and serving a radius of 50 or more miles taking in Rico, Ouray and Silverton.

… the benefit … of this enterprise to the development of the mining industry, and the transformity of unprofitable mines into profitable mines, ought to be apparent. Not only does it furnish unlimited power at a great reduction of the costs over the generation by steam, but it reaches the most inaccessible places, and wherever the hardy prospector can discover a paying mine or the intrepid mining promoter install a machinery plant, the wires of the Telluride Power company will follow him and drive his apparatus."

- **1905:** An auxiliary flume is built above Ilium Power Plant. There is later mention that this auxiliary flume was demolished and replaced with a metal tank, thus there being no existing signs of it. However, when exploring the area above Ilium Power Plant, there are large cleared sections, where this auxiliary flume most likely sat: "The Telluride Power Company is building an auxiliary flume on the hillside above the Ilium power station of the company. This flume will be nearly a half mile long, sixteen feet wide, and ten feet deep. It is to be built below and parallel with the old or service

flume and will be used as a storage reservoir, from which water can be drawn in case of emergency, increasing for a limited time the output of the station 1,000 horse power. In the service flume during the day, slightly more water than is needed will be carried and this surplus water will be stored in the new flume for use at night, or in the early evening when the load is the heaviest.

...To build the new flume, 30,000 feet of lumber is required, and to get this lumber up the hill 500 feet above the Rio Grande Southern tracks, a surface tram is being constructed. Operated by an electric hoist. The tram has a grade of fifty-three percent and the men all wear climbers in order to hang onto the hillside. ...About thirty men are employed on the construction and a camp has been established near the head of the tram, consisting of seven or eight shelter tents with the mess ten t in charge of Lou Barthell, which insures the boys good grub.

...The out-put of the Ilium station is 2,000 horse power, and that of Ames station, a little more than 2,000. With the completion of the new storage flume, another 1,000 horse power will be available, and when the connection is made with Ouray plant next week, still another 1,000 horse power will be at the companys disposal, making upwards of 6,000 horse power in all.

...The Telluride Power Company has leased the Ouray Electric Light Company's plant at Ouray, which is also operated by water power, and will have completed the stringing of wires next week. The three stations [Ames, Ouray, Ilium] will be operated and regulated from the Ilium station and though separated by many miles the generators will run in perfect unison as though located in one room. At the Ilium station, sits an operator with either hand upon a lever which regulates the speed of two immense Pelton wheels under his control, his eyes glued upon two indicators which show him the pressure upon the wires and the size of the load. These indicators are never still a minute, the load varies constantly, the operator being compelled to keep the regulating levers moving so that the pressure on the lines may be always uniform.

...The Telluride Power Company now lights the city of Telluride, Smuggler, Ophir, and Ophir Loop. Furnishing power and lights for the Butterfly-Terrible, and Silver Bell mines and mills, at Ophir Loop, the Alta, in Gold King Basin, the Liberty Bell, the Bear Creek mill, the Smuggler Union, and the Pandora mills at Telluride; the Barstow, at Red Mountain on the Silverton side, the Camp Bird on the Ouray side, the Japan and Tomboy, in Savage basin, and a number of other smaller propositions.

...Telluride owes all to the Power Company. Coal is distant and transportation difficult, nearby water power inadequate. Without electric power some of the mills of the district could not have been, presumably, operated at a profit. Then let there be homage to whom homage is due." (San Miguel Examiner, October 14, 1905)

ILIUM FLUME: TIMELINE

- **1905:** Despite all the glowing praise heaped on the Telluride Power Company by the local newspapers, it faced plenty of struggles, with plenty of those troubles confined to the Ilium Power Plant and Flume: "Fifteen Finns, about half the force employed by the Power Company on the auxiliary ditch or storage reservoir [auxiliary flume] above the Ilium power plant, demanded a nine hour day last Saturday and when it was refused they quit work. The men have been receiving $3 per day, regular miners' wages for outside, work less dangerous and less laborious than mining. The Company had no trouble replacing the strikers and today have a full force at work, all the men they need…" (The Daily Journal, October 24, 1905).

  Striking workers weren't the difficult source of trouble however—it was the persistent damage to the Ilium Flume by Mother Nature: "About 10 o'clock Thursday night a land slide took out about fifty feet of the Power company's flume in the bluffs a mile or so above the Ilium generating station, necessitating the shutting down of the Ilium dynamos, and throwing the entire load upon the Ames station. This forced a partial shut down of the several mines and mills deriving power from this company. The Alta mill shut down and the Tomboy ran at half capacity yesterday. As soon as word reached town Foreman Smith hustled his force out of bed, rustled three or four teams and loading them with lumber started out to repair the damage… "(The Telluride Journal, June 29, 1905).

- **1906:** Another example of the same: "Sunday about 11 o'clock in the morning a mud and rock slide on the hill above old Ames ran between 100 and 200 feet striking the Telluride Power Company's flume which conveys water to the Ilium power plant and taking out a span of fifty feet in length.

  The Company is so resourceful that the power was only shut off for a few hours and the patrons received all that was contracted for from the other plants at Ames and on the Ouray side.

  Twenty men were soon at work and the damage was repaired today by 4 o'clock.

  This slide which is called the "Black Slide," is very capricious and has done the same thing before several times, causing considerable expense each time to the company, but the consumers would hardly know of its existence only for the mention of it in the press." (Telluride Journal, May 23, 1907).

- **1909:** The well-known Trout Lake flood in September 1909, which completely destroyed the Ilium Power Plant, has been documented numerous times. Lesser known is how, on December 26 of the same year, the Ilium plant was hit with yet another flood: "Yesterday afternoon an ice jam which had formed somewhere on the river between Ilium and Ames, broke and let loose its deluge of waters and flooded the recently re-erected Ilium station with three feet of ice and water and doing sufficient

damage to the equipment of the plant to necessitate its closing down for several days for repairs.

The plant had just recently been completed after being totally destroyed by the memorable flood of September 5th, and only a few men were left to complete the repairs, but a large force of some fifteen men went down this morning to help get things in shape again. …In this period of forced shut down the opportunity will also be taken to repair a portion of the flume which had settled to such an extent that water would not go through." (Daily Journal, December 27, 1909)

- **1911:** Beyond damage to the flume from forces of nature, the sediment that settled at the bottom as the water flowed through it had to be dealt with as well: "CLEANING FLUME—A squad of men...went to Ilium this morning to clean the accumulation of sand from the flume just above the power house. About four feet of sand has been carried by the flowing water into the flume, filling it half way to the top." (Telluride Journal, July 6, 1911)

- **1913:** Telluride Power Company's assets and plants are now owned by the newly-formed Western Colorado Power Company: "The Western Colorado Power Company (WCPC) was organized on March 12, 1913. By the next year it had consolidated the operations of eight major companies: the Durango Gas and Electric Company, San Juan Water and Power Company, Nunn's Telluride Power Company, the Telluride Electric Light Company, and (in 1914) the Ouray Power and Light Company, Montrose Electric Light and Power Company, Delta Electric Light Company, and Ridgway Electric Company. The new Western Colorado Power Company encompassed thirty predecessor companies, which had an average corporate life of only six years. Networking of the formerly isolated power plants was a daring concept, never before attempted on this scale. It involved construction of transmission lines through the steep mountains and construction of additional power generation sources. One result was a sharp decrease in the costs of electrical service." (Source**:** https://swcenter.fortlewis.edu/finding_aids/inventory/wcpc.htm)

- **1915:** While there are numerous articles over the years reporting on damage to the flume, this one illustrates how the power company had methods to divert water into the flume from Vance Creek and Turkey Creek, to keep Ilium Power Plant operational: "A force of 20 men is now employed in the task of repairing the water flume of the Western Colorado Power company which has taken out in several places between Ames and Ilium the latter part of last week by mud and rock slides. Since the breaks in the flume, occasioned by the Big and Little Black Slides running, occurred, other portions of the flume have been taken out … It seems the entire hillside, along which

the flume is laid, is slipping and further trouble with the flume may be encountered. Water from Turkey Creek and Vance Creek has been turned into the lower end of the flume, which was not damaged by the slides and the Ilium plant is once again in operation." (The Daily Journal, May 4, 1915)

- **1923:** The Ilium Flume is completely rebuilt: "Work on the $200,000 contract for rebuilding the big flume on the Western Colorado Power Co., extending from Ames to the power plant at Ilium, commenced March 15. The company furnishes power for many of the larger mines in southwestern Colorado, as well as for illumination in the larger towns. The flume will require about 2,000,000 ft. of lumber, will be 30,000 ft. in length, and will entail an expenditure of over $200,000." (Engineering and Mining Journal-Press, April 14, 1923). **The rebuilt flume from 1923 is what remains today.**

- **1924:** Despite a new flume, the troubles continue: "A big rock which was loosened from the hillside by the "spring thaw" crashed through the Ames-Ilium flume on Monday evening and caused considerable damage." (The Daily Journal, April 16, 1924)

- **1960:** The Western Colorado Power Company files an application with the Federal Power Commission to decommission the Ilium Power Plant: "The application states that the Ilium plant has not been in service since July 1959 when a portion of the wood box flume collapsed and further operations became impossible. Continued operation would require, according to the application, a new flume and semiautomatic controls, the cost of the installation of which would render the operation of the plant economically infeasible, and, moreover, other facilities belonging to the licensee are sufficient to supply all power demands within the licensee's territory."

ILIUM FLUME: RECOLLECTIONS

Recollections of Ilium Flume, from *Conversations at 9,000 Feet: A Collection of Oral Histories from Telluride, Colorado*, compiled by Davine Pera, Wilkinson Public Library, 2000:

"The water from the Ames power plant went down to Ilium through a flume. It poured into a big metal tank at the top. Now before that, they had a big wooden forebay. That was a huge thing. But it filled up with sand and they couldn't use it any more. It was just immediately above the [Ilium] power plant. It was a half a mile long, and it was made out of redwood, ten feet high and nineteen feet wide, I think. Then they got this huge metal tank that they put up there…" - Charles Hosner (page 100)
*Mr. Hosner is most likely referring to the auxiliary flume that the Telluride Power Company built in 1905. Given that it became unusable, and was replaced with a metal tank, it was most likely demolished during the time of the plant's operation—and hence there being little to no signs of this auxiliary flume today.

"That flume was a real big maintenance thing. When it finally did have its problem that caused its demise, some of it as I understand is washed out, it was just too prohibitive to replace it. Now it never would have been built because it would be too expensive. And when you stop to think, all of that stuff was cut and fitted by carpenters using handsaws. There wasn't a power saw there. It was all hand stuff and they hand nailed it." - Charles Hosner (page 102)

"… it took a lot of work to keep these flumes maintained. You couldn't do it in the wintertime when there was three or four feet of snow around them, so that had to be done in the summertime. A lot of places the ice would slough off down against the flume, and you had to muck that out. The trestles sometimes needed repaired; some of the timbers got broke. They had to have flume walkers that worked the year around … looking for leaks … He carried a little sack of oakum with him and a putty knife or some kind of knife that he'd go along and patch the leaks with. Course, if it was something big that he couldn't handle, he would report it; then they would send out more help to fix it. He did that year round, winter and summer. Wintertime was on snowshoes. In all kinds of weather, too. The Ilium flume … used to have two flume walkers. They had one that

lived at the lower end of the flume and one at Ames, the upper end. And they each walked half way, patrolled the flume half way. Then later on, they built the flume house down, not quite half way down there, and they done away with one flume walker. The flume walker then walked down one day and up the other day. The Ilium flume was a lot worse to maintain then the Trout Lake flume. They had more trestles to maintain. Some of them were pretty high. Not only that, they had the two slide areas they had to fight. Mud slides. They called one the Big Black Slide and the other the Little Black Slide."
- Walter Pera (pages 104-105)

ILIUM FLUME: HISTORIC PHOTOS

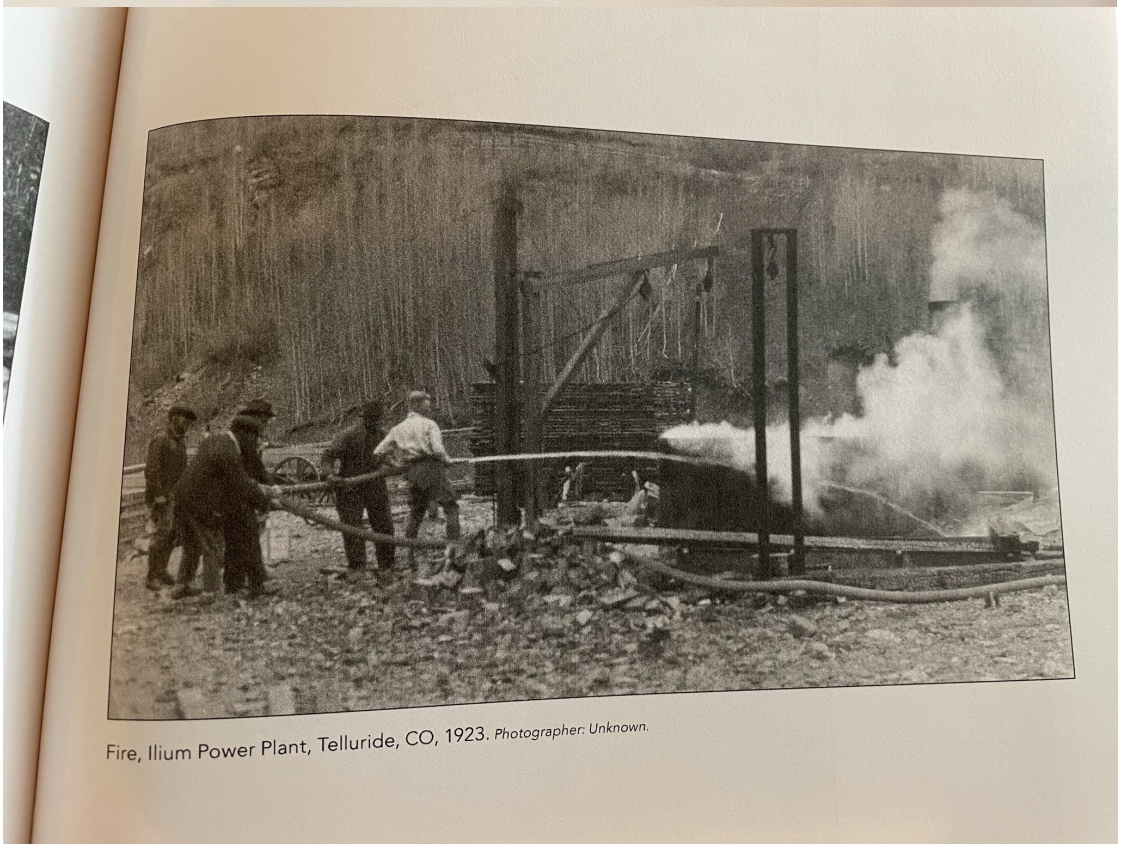
These historic photos are in the Western Colorado Power Company Collection at the Center of Southwest Studies, Fort Lewis College, Durango, CO - they can most likely be acquired for use on historic interpretive panels. Their collection is not online so there's a good chance they have even more photos of the flume, etc.:

- Photos of the Ilium Flume being rebuilt in 1923. -

ILIUM FLUME: HISTORIC PHOTOS

Western Colorado Power Company Collection at the Center of Southwest Studies:

Working on Ilium flume, Telluride, CO, 1923. *Photographer: Unknown.*

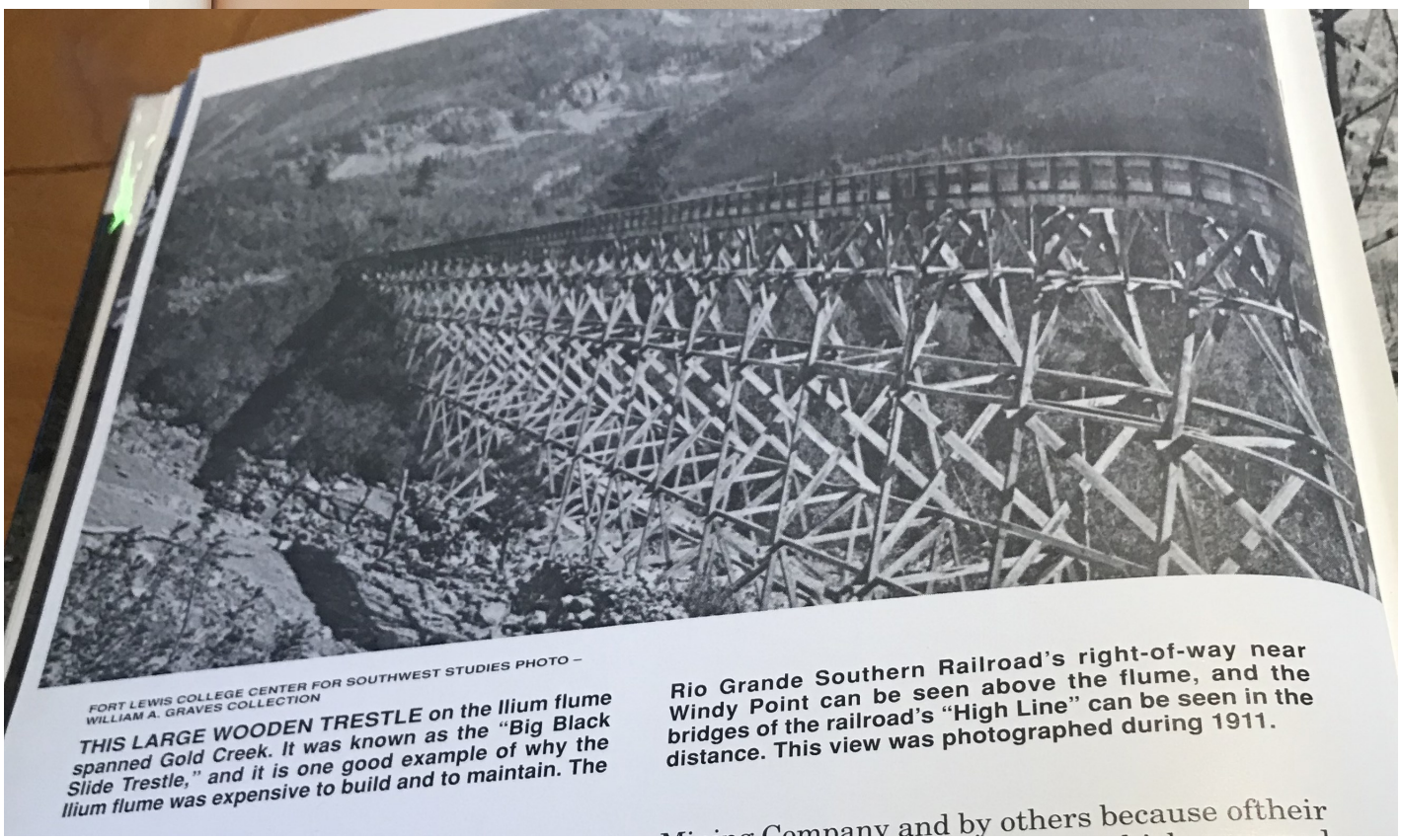


Fire, Ilium Power Plant, Telluride, CO, 1923. *Photographer: Unknown.*

ILIUM FLUME: HISTORIC PHOTOS

Western Colorado Power Company Collection at the Center of Southwest Studies:

Wreck of Big Black Slide trestle, Ilium flume, Telluride, CO, c. 1915. *Photographer: P. C. Schools.*



FORT LEWIS COLLEGE CENTER FOR SOUTHWEST STUDIES PHOTO – WILLIAM A. GRAVES COLLECTION

THIS LARGE WOODEN TRESTLE on the Ilium flume spanned Gold Creek. It was known as the "Big Black Slide Trestle," and it is one good example of why the Ilium flume was expensive to build and to maintain. The Rio Grande Southern Railroad's right-of-way near Windy Point can be seen above the flume, and the bridges of the railroad's "High Line" can be seen in the distance. This view was photographed during 1911.

Company and by others because oftheir

ILIUM FLUME: HISTORIC PHOTOS

Denver Public Library, Ilium Power Plant photo (available for use, CHS.X4823):

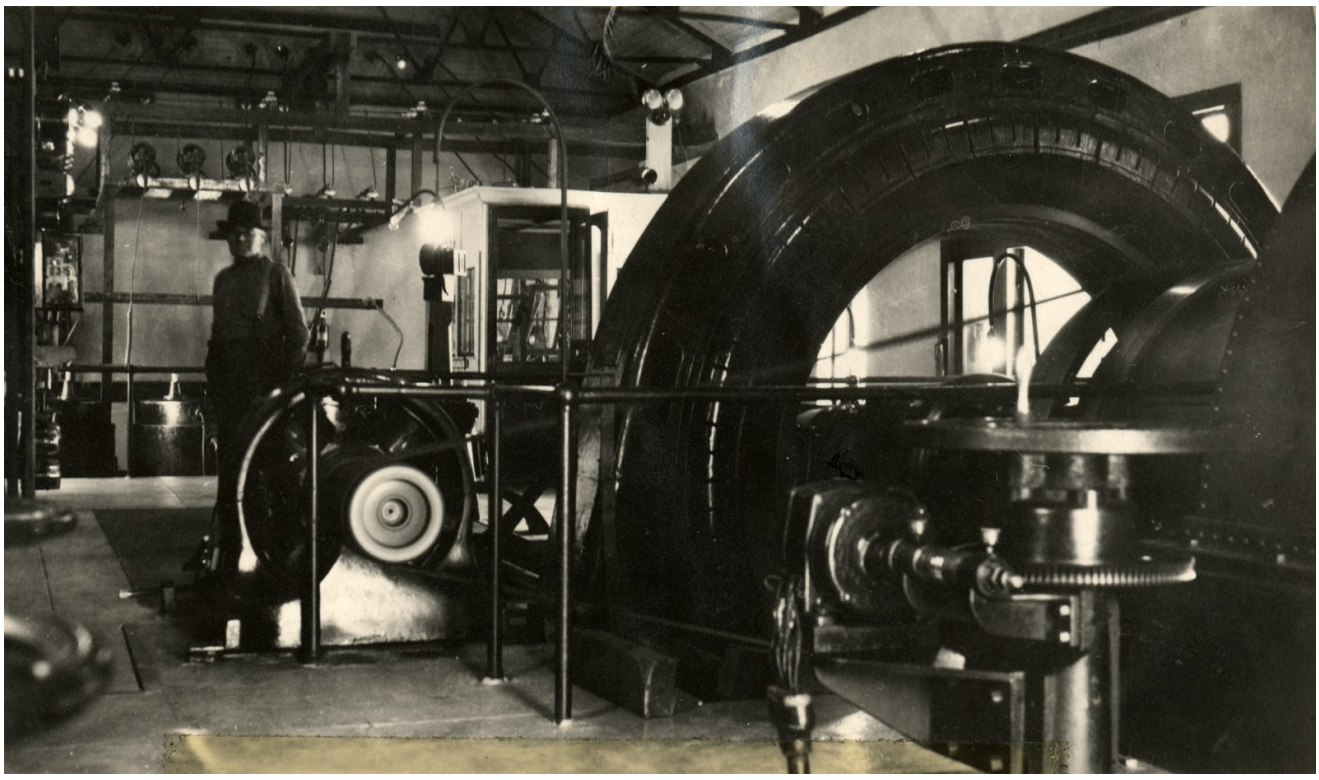
ILIUM FLUME: HISTORIC PHOTOS

Telluride Historical Museum photos (available for use):

Given the width of the flume in this photo, it's most likely the auxiliary flume built in 1905, in the area above Ilium Power Plant .

ILIUM FLUME: HISTORIC PHOTOS

Telluride Historical Museum photos of Ilium Power Plant (available for use):

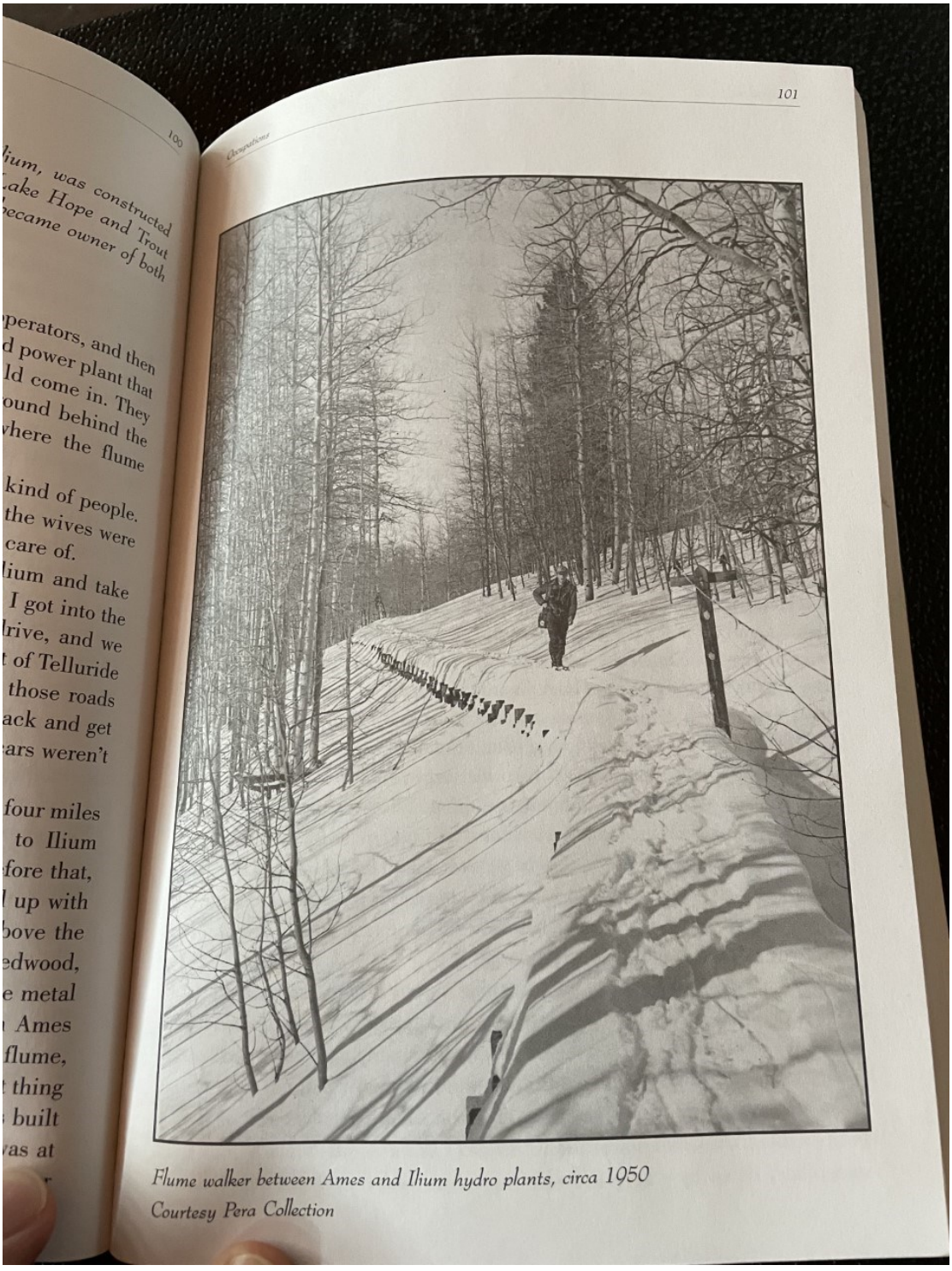


ILIUM FLUME: HISTORIC PHOTOS

Telluride Historical Museum photos of Ilium Power Plant (available for use):

****There are numerous historic photos of AMES POWER PLANT available for use from multiple sources that could be used on interpretive panels as well.**

ILIUM FLUME: HISTORIC PHOTOS



Flume walker between Ames and Ilium hydro plants, circa 1950
Courtesy Pera Collection

Page 101*, Conversations at 9,000 Feet: A Collection of Oral Histories from Telluride, Colorado*, compiled by Davine Pera, Wilkinson Public Library, 2000. (Not sure if this photo can be acquired.)

ILIUM FLUME: MODERN PHOTOS

Examples of existing remnants of the Ilium Flume, in various states:

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