Nevada County Historical Landmarks Commission
P.0. Box 1014
Nevada City, California 95959
info@nevadacountylandmarks.com
530-274-7118

17 March 2023

Nevada County Board of Supervisors
950 Maidu Avenue
Nevada City, CA 95959

Honorable Chair and Board Members:

At today's meeting, the Nevada County Historical Landmarks Commission voted unanimously to recommend to the Board that the application for landmark designation of The Rome Power House be approved. The applicant is Michale Funk, who owns the site. The landmark is to be designated as Nevada County Historical Landmark NEV 23-01.

The Power House, which began operating in 1896, was the first hydroelectric generating plant built on the South Yuba River. It initially served mines in the area, led to the electrification of Nevada City, and helped give birth to California's hydroelectric power industry. Its founders merged their California Gas and Electric Co. with the San Francisco Gas and Electric Co. to create the Pacific Gas and Electric Co. in 1905.

The research and documentation which accompanies the application has been reviewed by several Commissioner for historical accuracy. The application and supporting documentation is enclosed.

If you approve the application, please forward the resolution and accompanying documents to the County Recorder. If you have any further questions, do not hesitate to contact me. Thank you in advance for your consideration of this request.

Yours truly,

Bernard Zimmerman

Bernard Zimmerman, Chair

cc: Michael Funk

County of Nevada
State of California

Nevada County Historical Landmarks Commission
Application for Registration of Historical Landmark

Name of proposed landmark **THE ROME POWER HOUSE**

Location **SOUTH YUBA RIVER BETWEEN THE HWY 49 BRIDGE AND PURDON CROSSING. APN: 032-450-004-000**

Name of applicant **MICHAEL FUNK**

Address **19700 PURDON ROAD, NEVADA CITY, CALIFORNIA 95959**

Home or work phone [redacted] cell phone _____

Name and address of owner upon whose property proposed landmark is located, if owner is not applicant _____

I consent to this application and authorize the placing of a plaque or marker on site.

Owner's signature
MICHAEL FUNK

2/3/23
Date

2022 rev.

Brief history and description of proposed landmark

(attach additional sheets as necessary)

"Pacific Gas and Electric Co. was created in October 1905, when the California Gas and Electric Co. purchased San Francisco Gas and Electric Co. This culminated a hectic 10-year when Eugene J. de Sabla Jr. and John Martin (In PG&E annals, called the "Fathers of PG&E") along with investment business partner, Romulus R. Colgate, built and acquired numerous powerhouses and gas and electric systems in northern California.

They first built the Nevada Powerhouse, near Nevada City on the South Yuba River, which was placed service on February 5,1896. This happened there because—

1) The many quartz gold mines in the area were hungry for cheap energy
2) The Pelton Wheel had been invented nearby and was manufactured in Nevada City and
3) An important catalyst was created when de Sabla, Martin, and Colgate were brought together in a remarkable partnership.

They expanded this plant in 1897 and went on to build the Yuba Powerhouse, near Browns Valley, in 1898, and the Colgate Powerhouse at Dobbins in 1899.

They made numerous acquisitions of other plants and gas and electric systems in northern California. This led to the creation of the California Gas and Electric Co. in 1903, with Romulus R. Colgate as President.

And it all started in Nevada County with the Nevada Powerhouse, or the "Rome" Powerhouse as it was affectionately called after Mr. Colgate's nickname." — A Dale Johnson, 2023

Historically significant aspects or properties of proposed landmark

The Rome Power House was the first and only hydroelectric generating plant built on the South Yuba River. Planning for the plant began in 1892. It entered service in 1896, initially serving mines in the area. It eventually led to the electrification of Nevada City, one of the early pioneering systems in California. Eugene J de Sable and John Martin, went on to help found Pacific Gas and Electric and were known as the "Fathers of P. G. & E"

How will the landmark be protected and maintained?

The remains of the Rome Power House includes foundations and remnants of penstocks and outflow piping. They are located on privately owned property situated on the South Yuba River between the Highway 49 bridge and Purdon Crossing. The owner has a deep interest in preserving the remains of the power plant and recognizes its importance to Nevada County history.

Bibliography. Cite or attach available books, records, articles or other materials pertaining to the proposed landmark.
Books and articles:

Please see the attached article The Nevada "Rome" Power House — the Birthplace of PG&E. — By A. Dale Johnson, 2008

A map of the power house location and flumes
Yuba River Power Development and the birth of PG&E timeline as prepared by A. Dale Johnson

Technical Data as prepared by A. Dale Johnson

Map showing the initial power distribution

A photo of the developers of the powerhouse, Alfonso Tregidgo and Eugene J. de Sable

Three photos of the penstocks and the powerhouse

Three photos of the construction of the powerhouse

A photo of the Excelsior diversion dam just below the powerhouse that fed the Excelsior ditch

A photo of the diversion dam near Purdon's Crossing that fed the powerhouse

Five photos of the powerhouse from different viewpoints

A photo of the high power Pelton Wheel added to the outside of the main building

An interior photo of the power plant

The Nevada City Substation

Nevada City Historical Society article by Pat Jones published in 1969 titled: A Little Powerhouse Called "Rome" 1895 to 1910

A photo of the Boarding House across the river from the power plant

A news article in the Union newspaper outlining the dismantling of the Rome power house

The original Prospectus for the Nevada County Electric Power Company in 1895

An early article on the Old Nevada County Electric Power Company

A photo of the founders of the power plant

Two photos of the existing remains of the Rome Power House

Other: (e.g. photographs, prints or drawings. Please list and attach separately)
SEE ATTACHED DOCUMENTS

Applicant's signature

2/3/23
Date

MICHAEL FUNK

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This completed form and all related documents shall be sent to the:

Nevada County Historical Landmarks Commission
Attention: Chairman
P. O. Box 1014, Nevada City, Cal. 95959

Attachments and related documents may be submitted in electronic format.

An application must be considered solely on its historic or architectural merits and not for commercial gain, political benefits, or other non historical reasons.
An individual Commissioner can advise and counsel an applicant, but all applications must be considered by the full Commission, meeting in regular session.

2022 rev.

ROME POWERHOUSE ON THE SOUTH YUBA RIVER

The birth of Pacific Gas and Electric

Prepared for the Nevada County Landmark Commission
February 3, 2023

The Nevada "Rome" Power House -- the Birthplace of PG&E

By A. Dale Johnson, © 2008, PG&E Retired

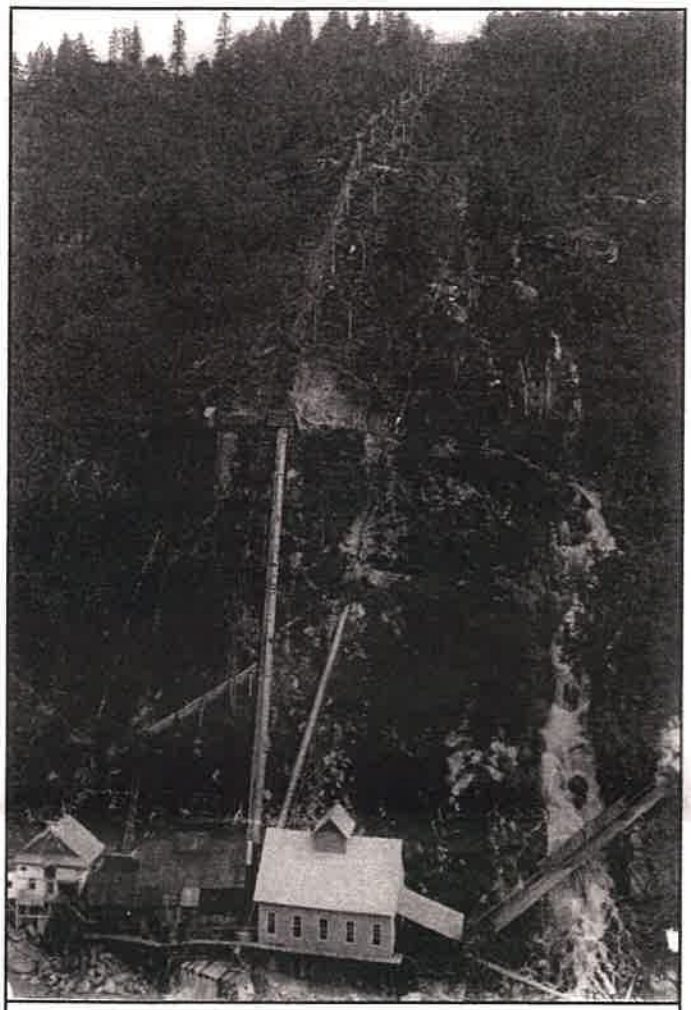
Overview

The Yuba River system gave birth to the hydroelectric power industry in the late 1890's as a result of several factors coming together at the same time —

•• mine owners were in need of reliable and lower cost power,
•• the Pelton Wheel was invented in Camptonville and first manufactured at Allan's Foundry in Nevada City,
•• existing mining ditches were idle or underutilized and could deliver water,
•• technology was being developed to transmit electricity over wires to distant locations,
•• and most importantly, two entrepreneurs by the names of John Martin and Eugene J. de Sabla came to Nevada City.

Romulus Riggs Colgate became an investment partner with de Sabla and Martin and together they developed hydroelectric power projects and acquired other projects throughout northern California. Within ten years they controlled the vast majority of all electric and gas systems in northern California, with the exception of San Francisco. They then purchased the San Francisco Gas and Electric Co., of which William B. Bourn was president, and merged it with their California Gas and Electric Co. to create Pacific Gas and Electric Co. in October 1905.

And it all started in Nevada County! This article will be the story of the Nevada Power House, or, as it was affectionately known, the "Rome Powerhouse".



Birdseye View of Nevada "Rome" Powerhouse — note flume at left center to low-head PH and penstock from top of mountain to high-head PH

Early Mining Ditches

The first major mining ditch was the seven mile long Rock Creek Ditch, constructed in 1850 to take water from Rock Creek to Coyote Hill in Nevada City. The Rock Creek Ditch Co. is considered to be the oldest entity on the PG&E corporate family tree. Charles Marsh, a pioneer in water development in Nevada County, and his partners built the Rock Creek Ditch for $10,000 and recovered it's cost in 6 weeks from the water-hungry miners.

The ditch business then became very competitive! Rivals built ditches from Deer Creek to Nevada City. Lawsuits about water rights led to consolidations and the Deer Creek and Coyote Water Co. in late 1851. Ground sluicing soon gave way to hydraulic mining, which was first used on Buckeye Hill by Anthony Chabot. One major company emerged in the Nevada City area, the Rock Creek, Deer Creek, and South Yuba Canal Co., in 1854. The company name was shortened to South Yuba Canal Company in 1870 and their office was located in the historic building now occupied by the

Eugene J. de Sabla, Jr. was a descendent of French nobility, born in Panama in 1865. He was educated in San Francisco and then took a course in assaying, where he met George Hearst and others of Mother Lode fame. He started his work life at a copper mine in Arizona, of which his father was part owner. It was here, that he first met Tregidgo. When the mine closed, due to falling copper prices, de Sabla returned to San Francisco and became a full partner in Eugene de Sabla and Company, and managed the business. The financial panic of 1893 resulted in his decision to liquidate his father's company.

John Martin, Entrepreneur

Romulus Riggs Colgate, Investor

John Martin was born in Indianapolis in 1858. He spent his boyhood in Brooklyn and since age 13 fended for himself. After experience in Alabama real estate and working for Armour in Chicago, he came to California. He worked for a San Francisco coal importing firm for a time and then established his own business, the John Martin Company, which dealt in pig iron. He was the agent for the U. S. Cast Iron Pipe Company.

Romulus Riggs Colgate, born in 1858, was a grandson of the founder of the Colgate Soap and Perfume Co. The lure of the West was strong, so he acquired gold-mining properties in Grass Valley and Nevada City. As fate would have it, he became an investor in the Nevada County Electric Power Co. after accidentally meeting de Sabla as he was on his way to the railway ticket agency. De Sabla was going to New York to ask his grand uncle Peter Marie de Sabla to invest. Colgate said "So, you are the nephew of Uncle Peter Marie, I know him and have dined at his home. But why go to him for money? Maybe I can take his place!" Colgate then became a $40,000 investor for one-fifth interest in the company. From that time on he became a strong financial backer of hydroelectric development.

Martin and de Sabla Become a Team

Tregidgo became part owner of the Peabody Mine in Grass Valley, after he left Arizona. He had become troubled by the high cost and inefficiency of steam power for pumping and other operations. He then conceived of the idea of supplying electric power to the mines from reading an account of transmission of electric power from Tripoli to Rome, Italy, and after hearing of early experiments in California. He decided to build a hydro plant on the South Yuba River, to serve, not only his own mine, but also others in Grass Valley and Nevada City. By this time, he had hooked-up again with de Sabla who had also acquired an interest in the Peabody Mine.

Late 1894 was the occasion when John Martin was invited to a San Francisco luncheon by a friend, Charles W. Randall, druggist and Mother Lode mine owner. Randall had also invited de Sabla, thinking that his friend, Martin might get an order to supply pipe for de Sabla's powerhouse project. Mr. de Sabla indicated he was planning to finance and build an electric plant on the South Fork of the Yuba River, with his associate Mr. Tregidgo. The three men talked of water, generators, and other aspects of the project. The Stanley Electrical Manufacturing Co. was talked about as making the best generators for their type project. Martin did not ask for an order, as he had something else in mind.....

It was, also, around this time that Martin had become aware of the Stanley Electric Manufacturing Co. through a Mr. Lindner, an electrician who had shown him a letter from the Stanley company. The letter authorized Lindner to sell Stanley products on a commission basis.

Martin, intrigued by the earlier luncheon talk, went to Pittsfield, Mass. where he obtained an interview with William Stanley, the inventor and head of the company. Martin had no electrical training, but he must have been very convincing, because they gave him the California agency for their products!

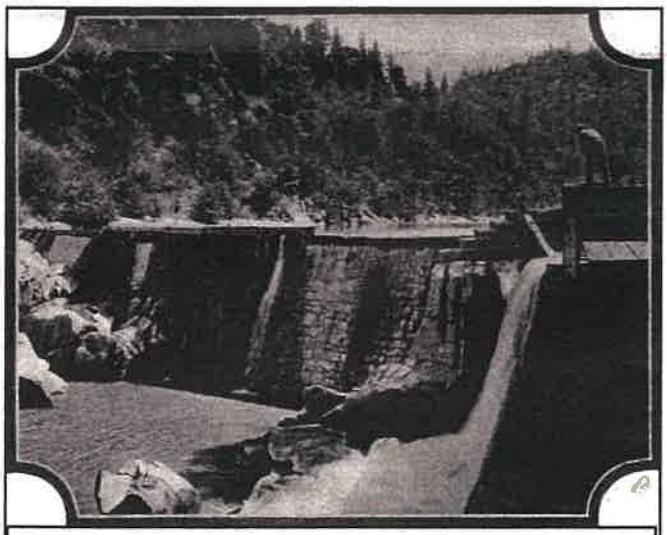
One day, two or three months later, Martin and de Sabla encountered each other on Montgomery Street in San Francisco. Martin said, "I'm

ready now for your order" and de Sabla replied, "What order?" thinking that Martin had forgotten all about their previous luncheon discussion.

Martin and de Sabla were then brought together into a remarkable team. They reportedly reached their agreement while staying at Nevada City's National Hotel. The story goes that the business negotiations took place in the hotel's bar and later in de Sabla's office in Suite 74! Thus, it can be said, that the National Hotel is the birthplace of PG&E, because the agreement made there led to a hectic 10-year period of development and acquisitions, and the creation of PG&E in October 1905!

Nevada "Rome" Power House

The Nevada County Electric Power Co. was incorporated on September 22, 1892, well before the historic Folsom project was envisioned and decided upon. Officers included Tregidgo as President, de Sabla as Vice-President and Fred Searls, Attorney. A financial depression then put the project on hold until 1895.



The diversion Dam for the first powerhouse was located 3&1/2 miles above the powerhouse on the South Yuba River.

The Nevada head dam, located about 1&1/2 miles above the Purdon Crossing, was started on August 1, 1895 and completed within four months. It was made of logs piled crib-fashion, 28 feet high and 107 feet wide at the top. Before the cribs could be filled with rock and gravel, the river began rising rapidly, stopping the work. Fortunately, the "slickens" washed down and filled every nook and cranny of the crib-work, packing it solid with deposits, better than it could have been done by the men! The head dam, years later, was fortified with a granite wall on the downstream face, 12 feet thick at the base and 2 feet at the top.

The flume, in itself a major project, was started July 6 and completed by November 28, 1895. It was 6' wide by 4 1/2' deep, 3&1/2 miles long, using 1,250,000 feet of lumber and 110 men for four months. The flume had a gradient of 26 & 2/3 feet per mile and could carry 5800 miner's inches of water to the penstock above the powerhouse site.

This view from the north side of the Purdon Crossing Bridge, shows the Nevada Flume on the slope above it on the south side.

head dam of the Excelsior Ditch, which had been installed 36 years earlier. This was a logical site because the water diverted to the powerhouse could be returned to the river without infringing on the water rights of the Excelsior.

The site was in a beautiful narrow mountain river canyon, but it was not a pretty picture from a construction standpoint. The machinery had to be brought in via rail to Nevada City from Colfax on the Nevada County Narrow Gauge Railroad and then hauled by wagon to the site.

The road above Nevada City had to be widened and two additional miles built to a location above Devil's Slide. Six to 12 horse teams hauled the machinery to the staging point at the end of the road, which was about 1000 feet higher in elevation than the powerhouse site. From there, the equipment was lowered down the 1700 foot slope, "Emigrant Gap style", first on wagons, then using heavy log sleds. The steepest slopes ranged from 32 to 39 degrees. Generally, three 1&1/2 inch

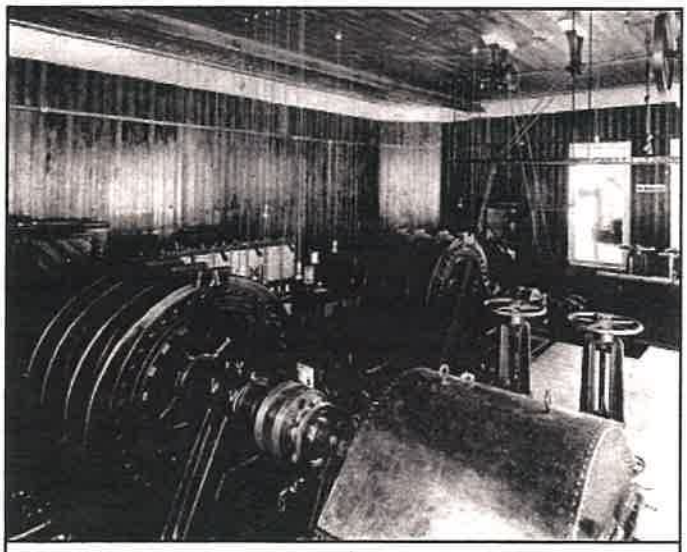
manila ropes were used to control the load by wrapping each several turns around a tree trunk.

The two Stanley generators, each consisted of six pieces, with the heaviest weighing 11,200 pounds. The largest item in size was the water receiver, which was 19 feet long, 4 feet in diameter and weighed 4 tons.

The Power House was built on a solid granite shelf. The floor was 18 inch thick concrete anchored by ¾-inch rods, which were sulfur-cemented into 18-inch deep holes drilled down into the granite. The canyon was so narrow that, the 10-bedroom boarding house was built on the opposite side of the river and was reached by a suspension footbridge.

The penstock was 298 feet long, with a head of 190 feet. It tapered down from 48 to 44 to 42 inches to the receiver. The receiver delivered water to the two sets of 2--34 1/2 inch Pelton Wheels through 2--3 inch jets on each wheel.

The main electrical equipment consisted of two Stanley generators, making 400 revolutions per minute. Each generator produced 300 kilowatts of two-phase, 133-cycle power at 5500 volts.



This shows interior of powerhouse No. 1, with two generators and two Pelton Wheels powering each.

A wood pole line was constructed 8 miles to Nevada City and Grass Valley, using 30 foot poles with two cross arms and 8--No. 3 B&S bare copper wires supported by triple-petticoat white porcelain insulators. The pole line Right-of-Way was cleared 60 feet wide.

On the business side, de Sabla had been signing up customers in the mining districts and his assistant, J. E. Poindestre, was soliciting orders for electric lights from business firms and owners of residences.

Technical problems delayed the successful operation from December 1895 to February 1896. But finally on February 5, there was success! As reported by the "The Daily Transcript" the following day "The electric lights of the Nevada County Electric Power Company were turned on at 6 o'clock last evening for the first time and attracted considerable attention. The lights were quite brilliant and the office of the company on Pine St. received many visitors. The lights were burned in Lane's livery stable, the Morgan House at Grass Valley and the company's office, these being the only places wired and connected thus far, but in a few days many other business places and residences will be connected and lights furnished them. The officials of the company felt very much pleased over the excellent beginning made and promise that it will not be long that power, as well as lights can be furnished to all who desire it."

Throughout the first phase of the Nevada Power House project, Tregidgo was in charge of construction, Martin handled the delivery and installation of the machinery, with much help from Engineer E.E. Stark, and de Sabla brought in the customers. Tregidgo continued as Operating Superintendent until October 1896, when he left for new adventure in Alaska's Klondike gold rush!

The High Head and Lake Vera

But success created more demand! Plans were made to provide additional capacity by utilizing South Yuba water, which got to the powerhouse by a roundabout way. They would use water delivered into the Rock Creek ditch via the South Yuba Canal.

A 327 foot long by 54 foot high crib-dam was started on March 1, 1898 to back-up water into a partially excavated basin that had formerly been the scene of hydraulic mining. It was completed in November. The new Lake Vera, named after de Sabla's oldest daughter, covered 42 acres and could furnish a constant flow of 1000 miner's inches for 30 days.

The powerhouse was expanded by adding a new building, just down stream from the existing

one. Two more generators were added, which more than doubled the plant output.

The Lake Vera viaduct was 2&3/4 miles long and had a gradient so gradual it took 1 hour and 5 minutes for water to reach the fore bay. It consisted of 2340 feet of flume, 11,400 feet of ditch (most of it an old mining ditch) to a small fore bay on the hillside, in the vicinity of the "staging" spot for lowering equipment down the canyon. Two thirds of the way along the way, the Meyers Ravine required an inverted siphon to be used to cross the gorge. The siphon was 36-inch pipe and 668 feet long.

The Lake Vera Dam was originally 54 feet high and it failed in early 1905, as this photo shows.

At this point, it would be appropriate to discuss the question-- "Is it the Rome Power House or the Nevada Power House?" John Martin had this to say " But it's a joke-- the calling of that little plant the 'Rome' power house. It is the Nevada powerhouse. The nickname came about in this way: Romulus R. Colgate was associated with me later in establishing the plant at Colgate, over on the Middle Yuba. After that big one had been named for him, some of us got to referring to the little fellow over on the South Yuba as the "Rome" power plant, "Rome" being the familiar shortening of Colgate's first name." It is clear, however, that "Rome" became the name of choice and even PG&E records use that name. And, after all "Isn't 'Rome' a more romantic name for a power house 'in the middle of no where' than 'Nevada'?"

The Lake Vera Dam burst on April 2, 1905, when a 29-foot by 30-foot section gave way, causing outflow that dropped water level one inch per minute. At the time of failure the water was 52 feet deep, two feet below the top of the 54-foot dam. Workmen stopped the flow with wood and cement. Afterwards, the dam operated with a 40' foot height and diminished flow capacity of 1000 miner's inches for 10 days instead of 30 days.

The Lake Vera expansion became known as the "High Head" plant, at 785 feet and the original plant as the "Low Head" at 190 feet. In conjunction with this, the 'normal' flow of the South Yuba flume was reduced from 5800 to 3800 miner's inches.

The Nevada "Rome" Power House operated 15 years, until 1910. It was shutdown, as obsolete, when the power on the system was changed from two-phase 133-cycle to 3-phase 60-cycle, the standard of today. This little plant long ago was the start of something big and is considered to be the "birthplace" of PG&E.

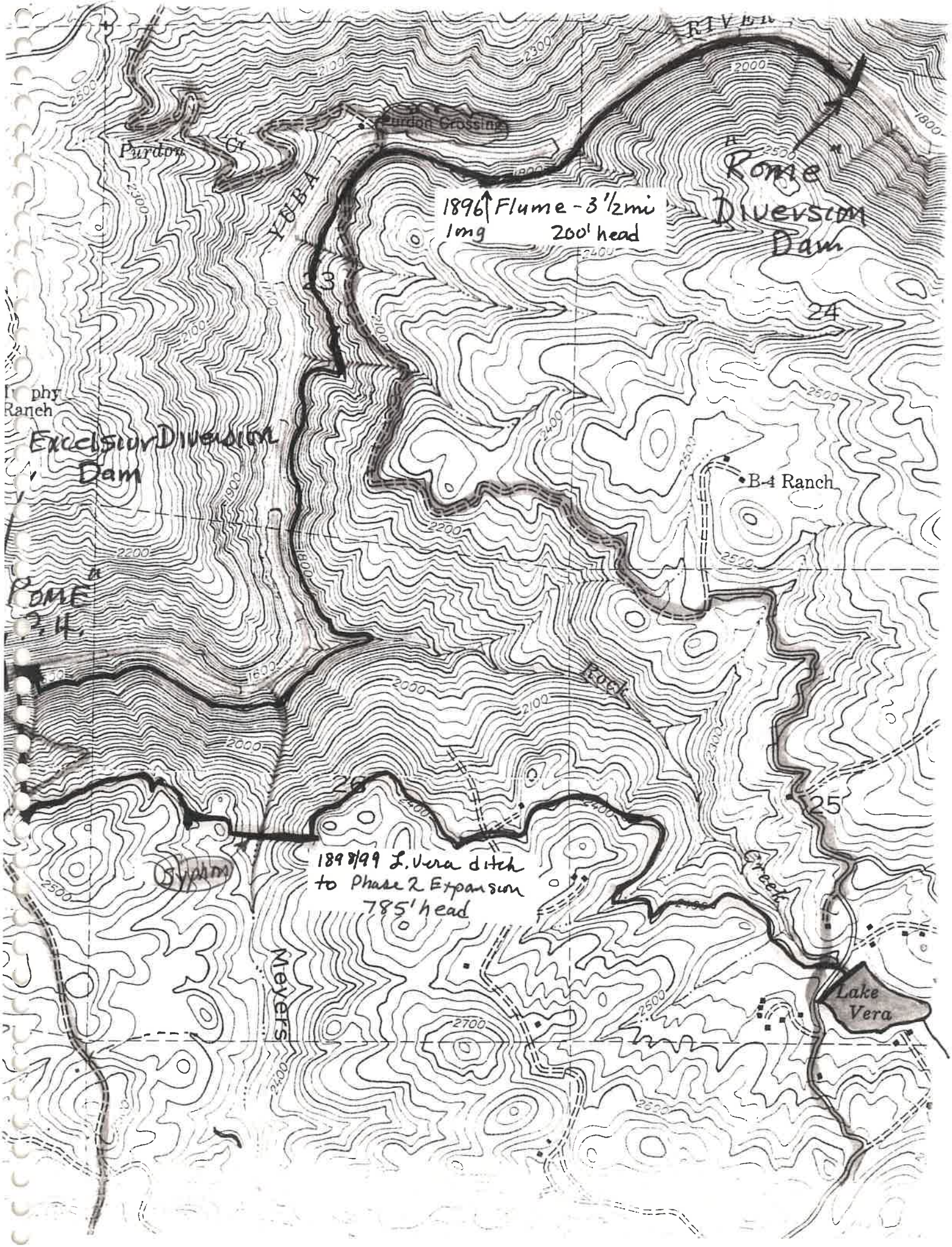
So--it can only be concluded that the "vision" and the "seeds" of this great enterprise did come from the Yuba River! A testament to this is the fact that throughout PG&E's history, Martin and de Sabla are referred to as the "Fathers" of PG&E. Perhaps the Yuba River should be considered the "Mother"!

About the Author:

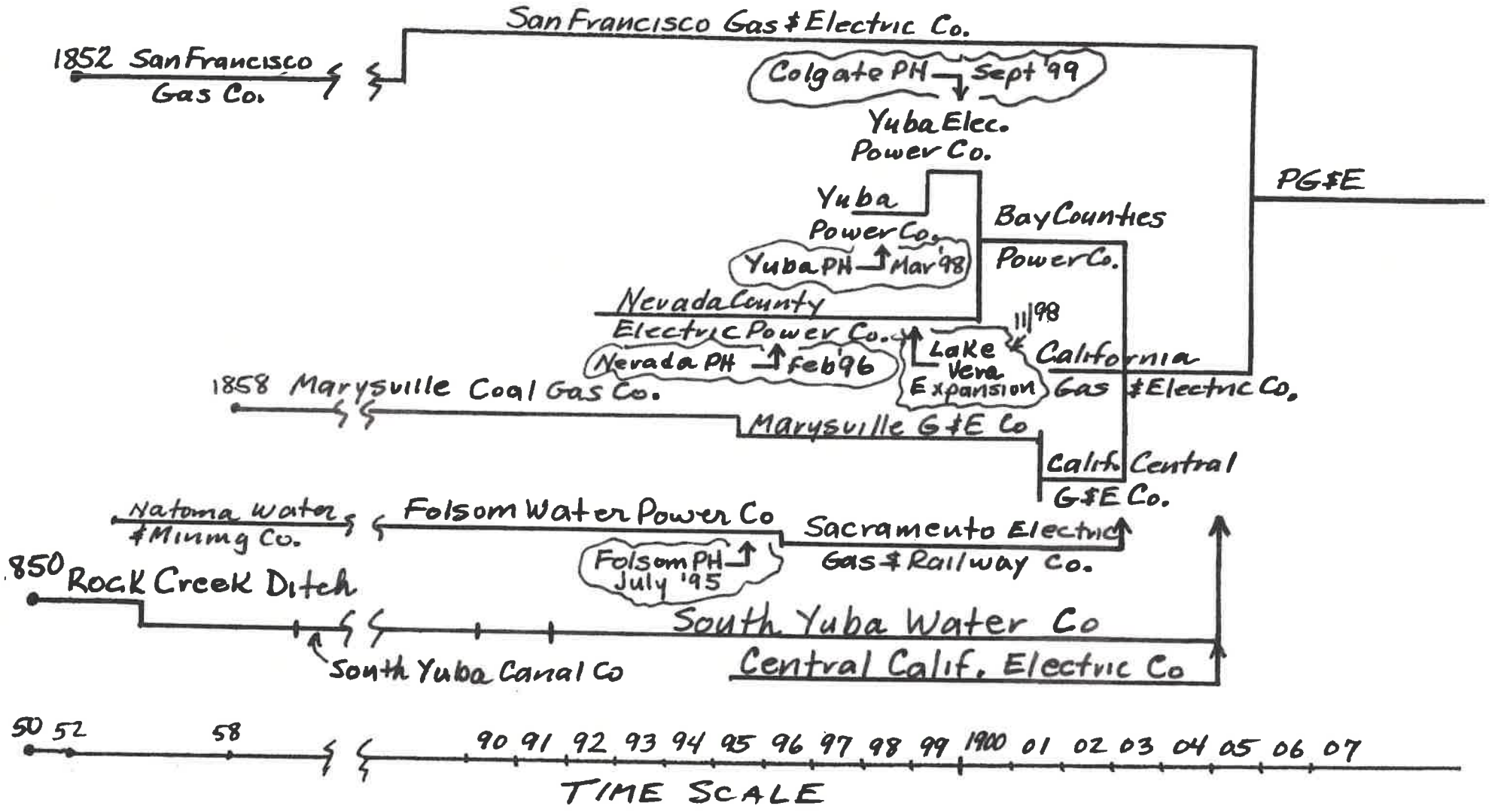
A. Dale Johnson retired from PG&E in 1993 after a 34 years with the company. He moved to Nevada City in 1994 and since then has been studying the water and electrical history of the Yuba River basin. He has led numerous Treks or outings for the Nevada County Land Trust and other historical organizations. Treks have been taken to

* Yuba Powerhouse (1898)
* Nevada "Rome" Powerhouse (1896)
* Colgate Powerhouse (1899)—Trek this year on October 25.
* Alta Powerhouse (1902)
* Historic Ditches of the South Yuba Canal Company (1850 to 1900)
* Deer Creek Powerhouse (1908) — The first Trek to this site will be this year on September 14 to celebrate its 100 year birthday.

He can be contacted at adalejohn@comcast.net or 530-272-7039.


Purdon Crossing
Purdon Cr
YUBA
1896↑ Flume - 3½mi
1mg 200' head
Rome Diversion Dam
24
Excelsior Diversion Dam
B-4 Ranch
ROME
2.4.
Rock
25
1898/99 L. Vera ditch
to Phase 2 Expansion
785' head
Siphon
Weyers
Lake Vera

YUBA RIVER POWER DEVELOPMENT AND THE BIRTH OF PG&E



Total = 1260 KW   600 + 660
vs 1000 Yuba, 15,000 Colgate, 3750 Folsom

TECHNICAL DATA

Nevada County Electric Power Co, Inc – Sept 22, 1892
envisioned well before Folsom

Obsolete by 1910

Original Plant

2 – 300 KW, 133 cycle, 2 φ Stanley inductn-type gen.
@ 400 RPM, generating 5000 volts
Each direct connected to 3' PW's
Three wheels on one unit & 4 on other
(I think this may be 2 and 3 (with the
third mounted outside building using

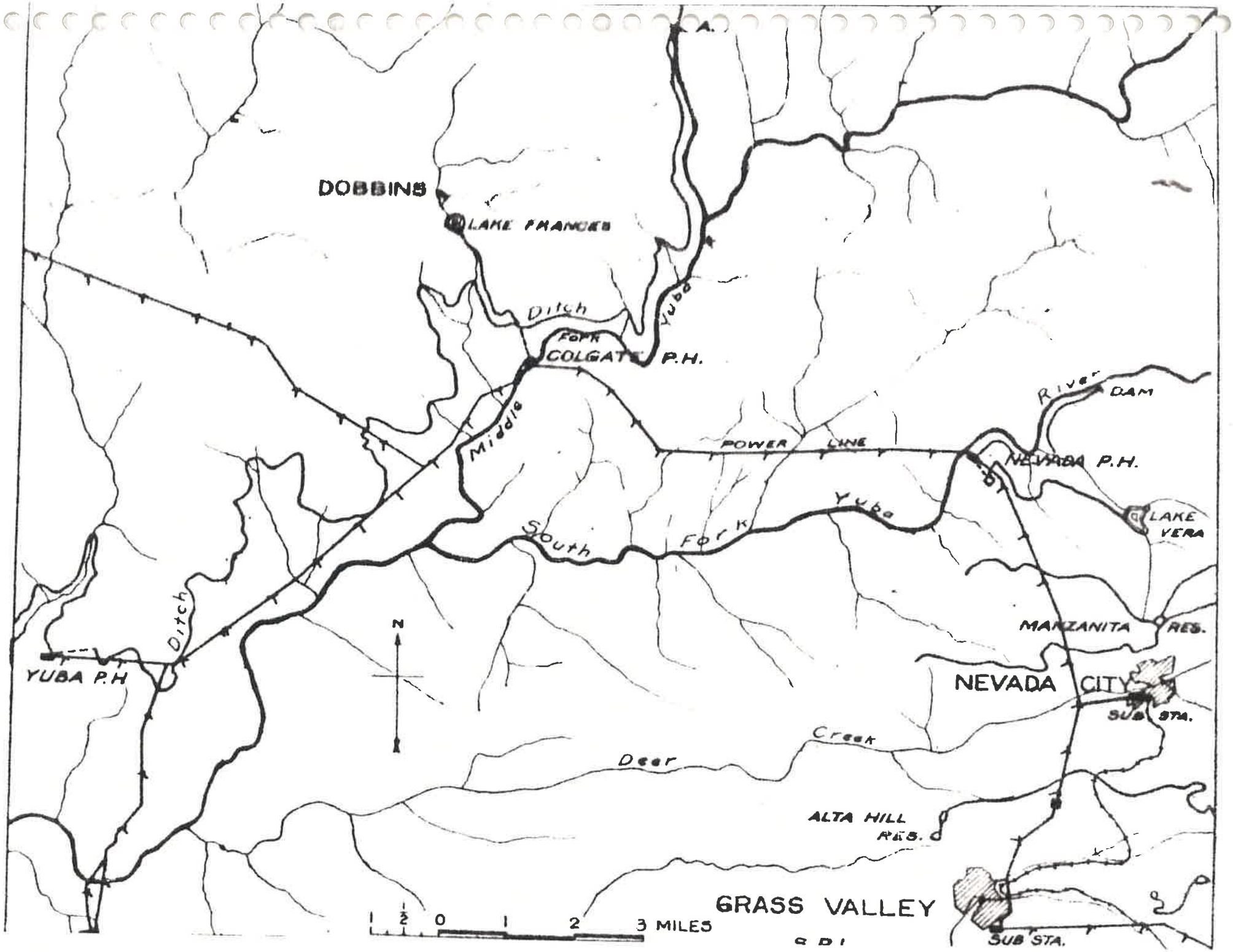
1 Hp = 33,000 #'s raised 1' in 1"

Nevada "Rome" Powerhouse -- Technical Data

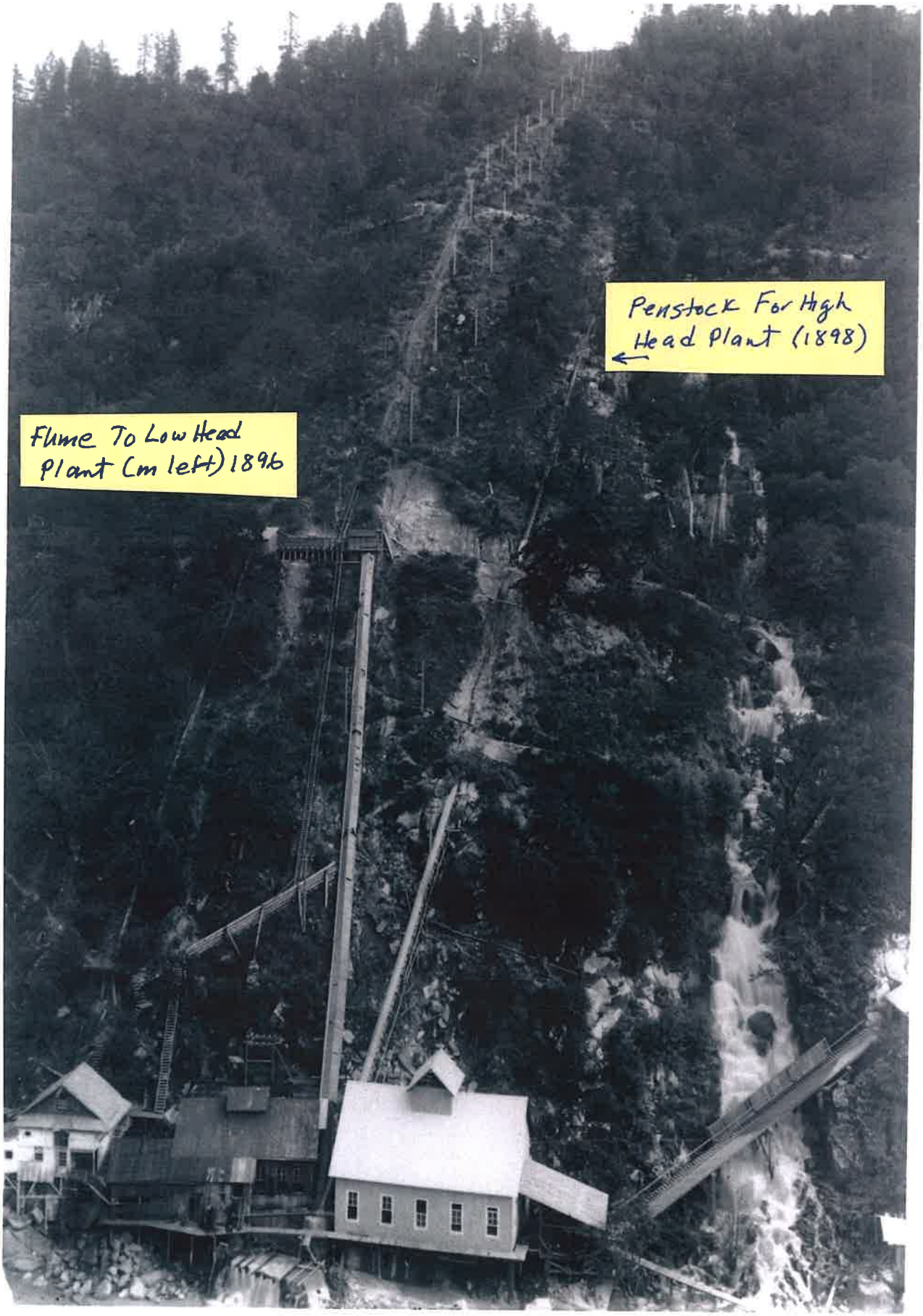
Generators -- 5500 volts @ 133 cycles, two-phase
Transmission -- # 3 Cu, 5500 volts, 8 mi. to NC & GV
Total Capacity -- 1260 kilowatts
Operation from Feb. 5, 1896 to October 28, 1910

Powerhouse No. 1 -- Two 300 KW units, built 1895-97
Water Wheels -- Two 34 1/2 inch Pelton Wheels per unit
Water -- Diversion from So. Yuba via 3 1/2 Mi. flume
Dam -- Crib-style, 28 feet high by 107 feet long
Head -- 190 feet (known as low-head plant)

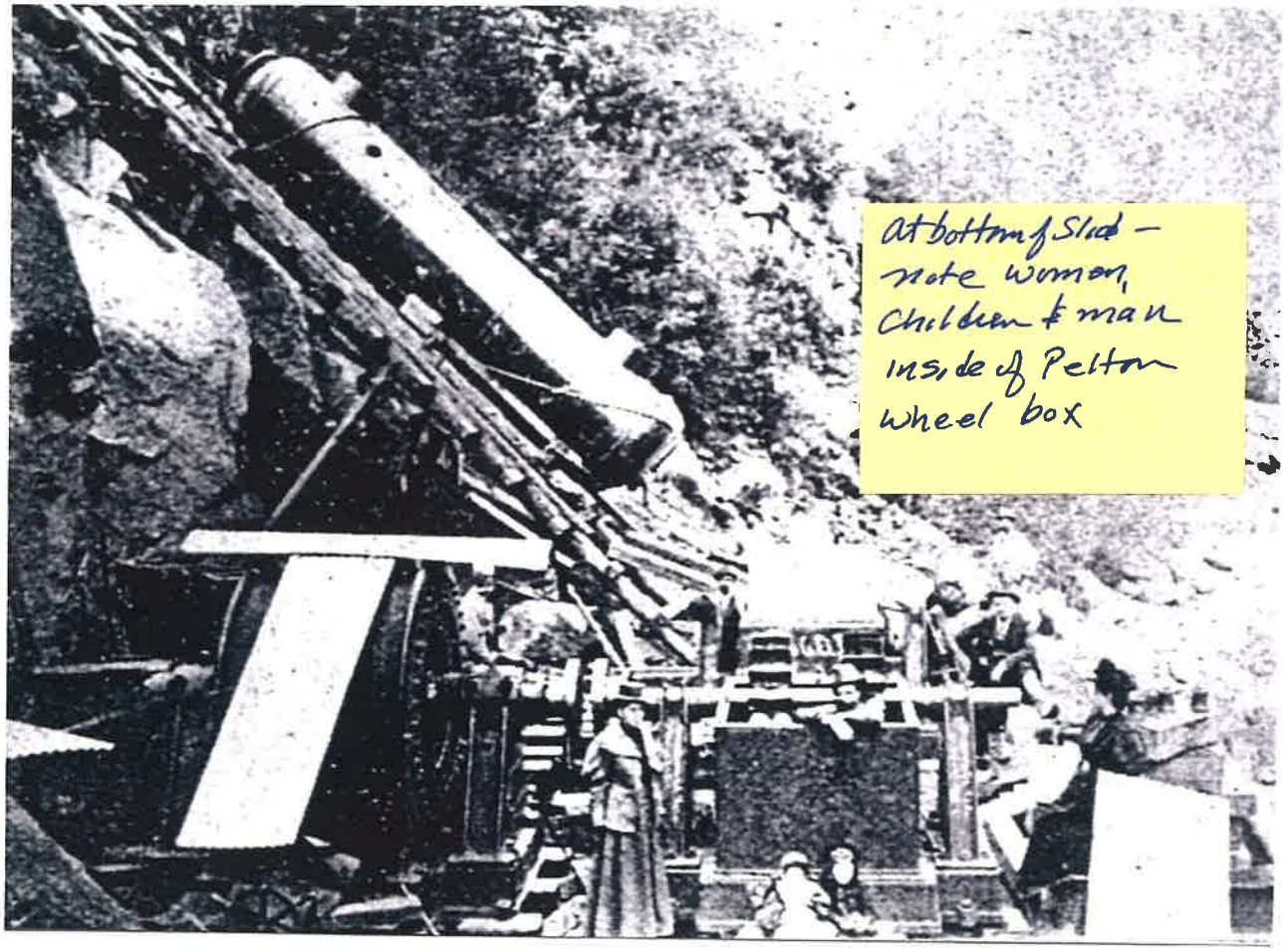
Powerhouse No. 2 -- Two 330 KW units, built 1898/99
Water Wheels -- Three 31 inch Tutthill wheels per unit
Water -- So. Yuba River @ diversion below current Spaulding Dam via So. Yuba Canal, then Ridge Ditch into Rock Creek and Lake Vera, then 2 3/4 mile ditch/flume/siphon.
Lake Vera - 42 acres, crib-style dam, 54' high and 327' long
Head -- 785 feet (known as high-head plant)
(An externally mounted 5' 6" wheel was also installed on the same shaft as the No. 1 generator, so it could operate from either of the water sources.)


DOBBINS
LAKE FRANCES
Ditch
YUBA
FORK
COLGATE P.H.
Middle
POWER LINE
RIVER DAM
NEVADA P.H.
LAKE VERA
South Fork Yuba
Ditch
YUBA P.H
N
MANZANITA RES.
NEVADA CITY
SUB STA.
Deer Creek
ALTA HILL RES.
GRASS VALLEY
SUB STA.
1/2 0 1 2 3 MILES

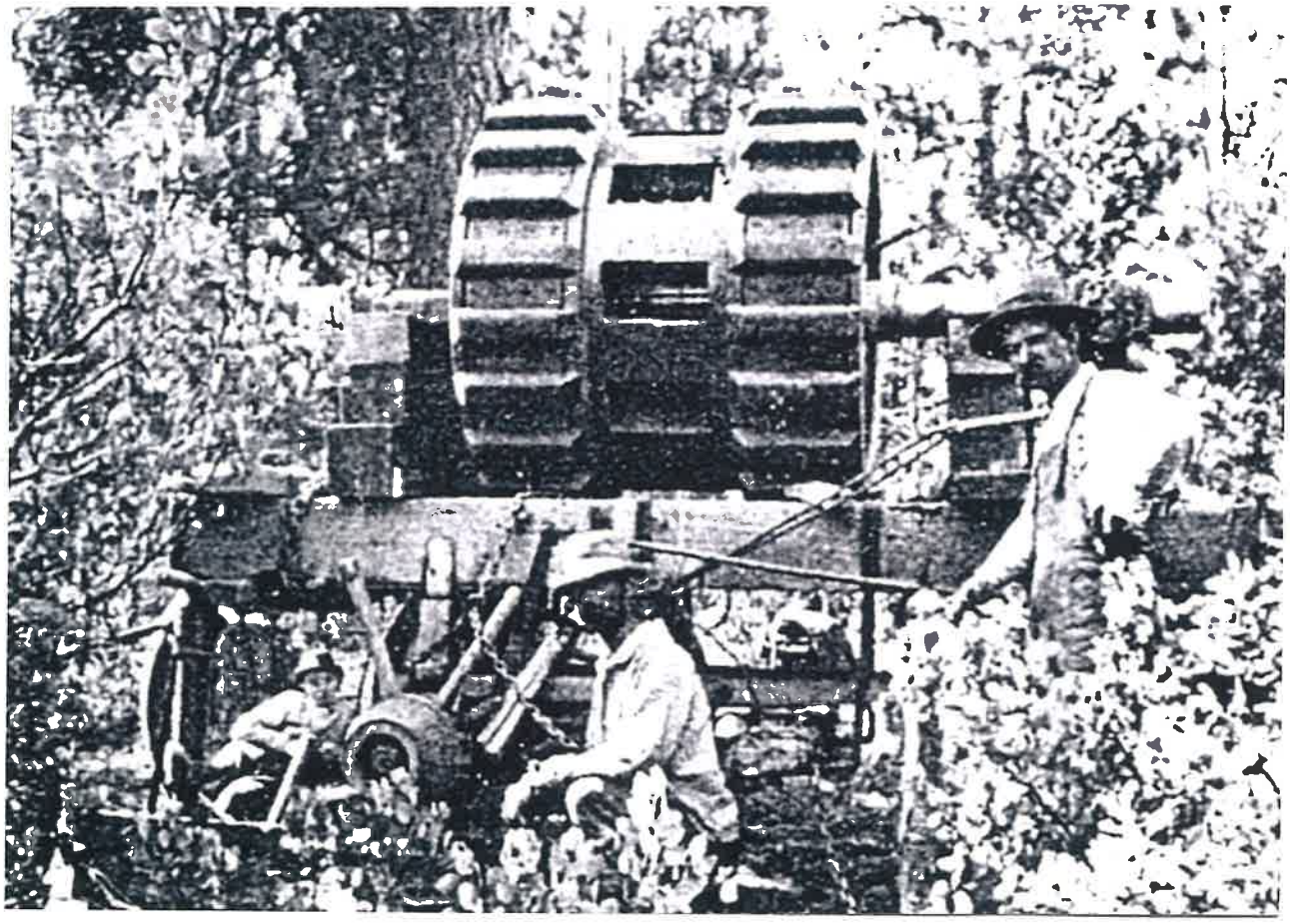
Alfonso Trediago (L)
& Eugene J. deSabla (R)


Penstock For High Head Plant (1898)
←
Flume To Low Head Plant (on left) 1896

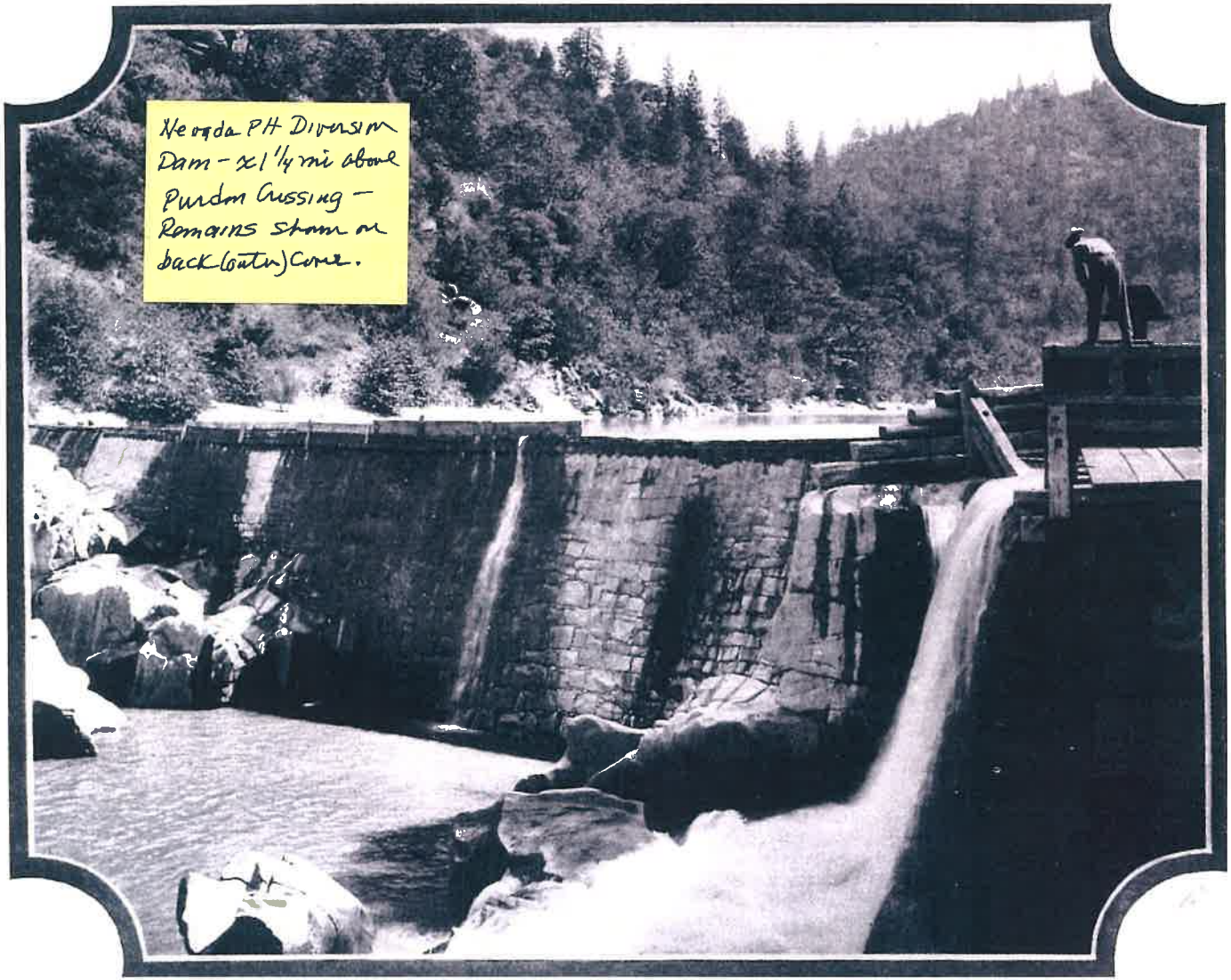
Staging area TO "sled" equipment down mountainside.

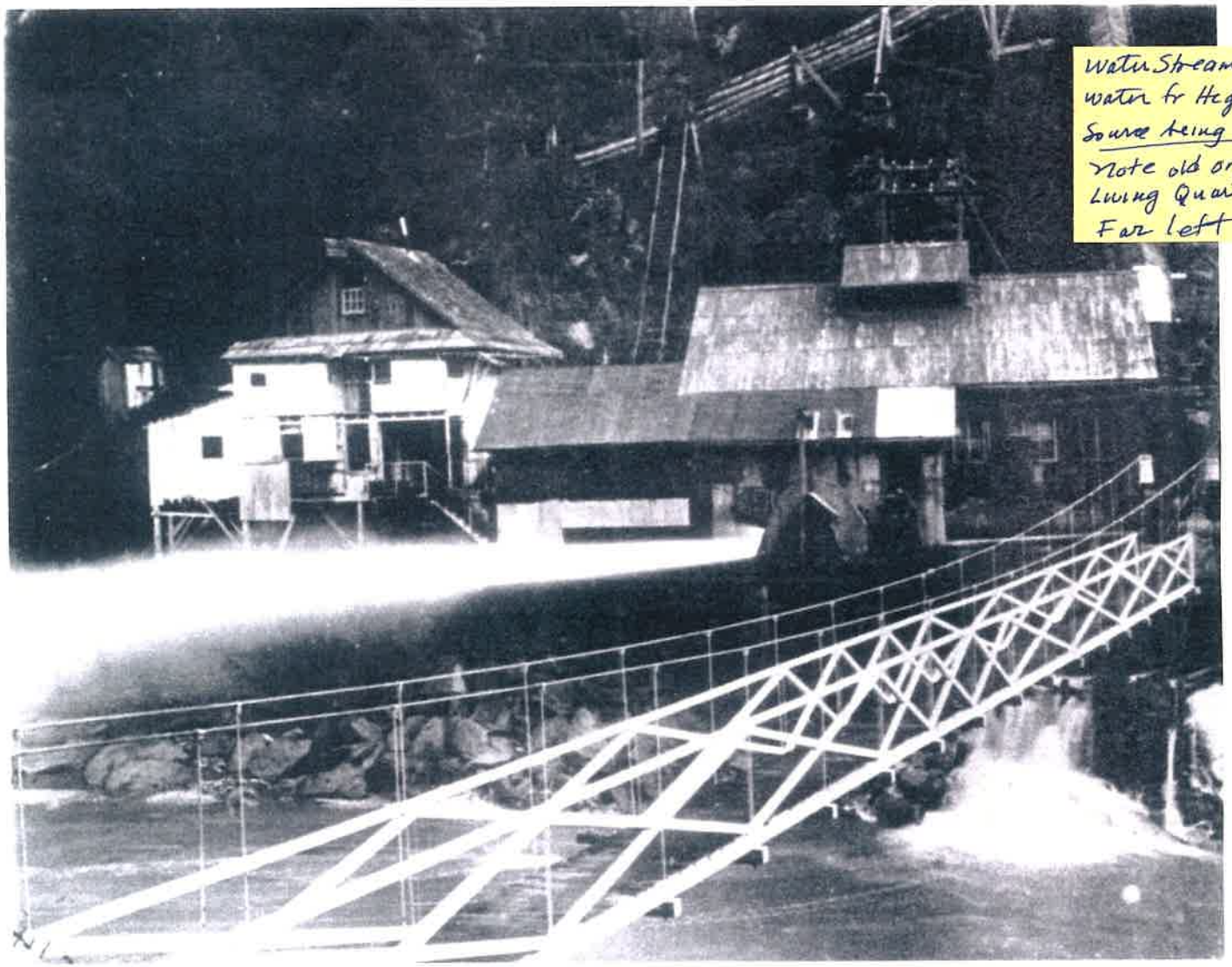


At bottom of Slide – note women, Children & man inside of Pelton wheel box

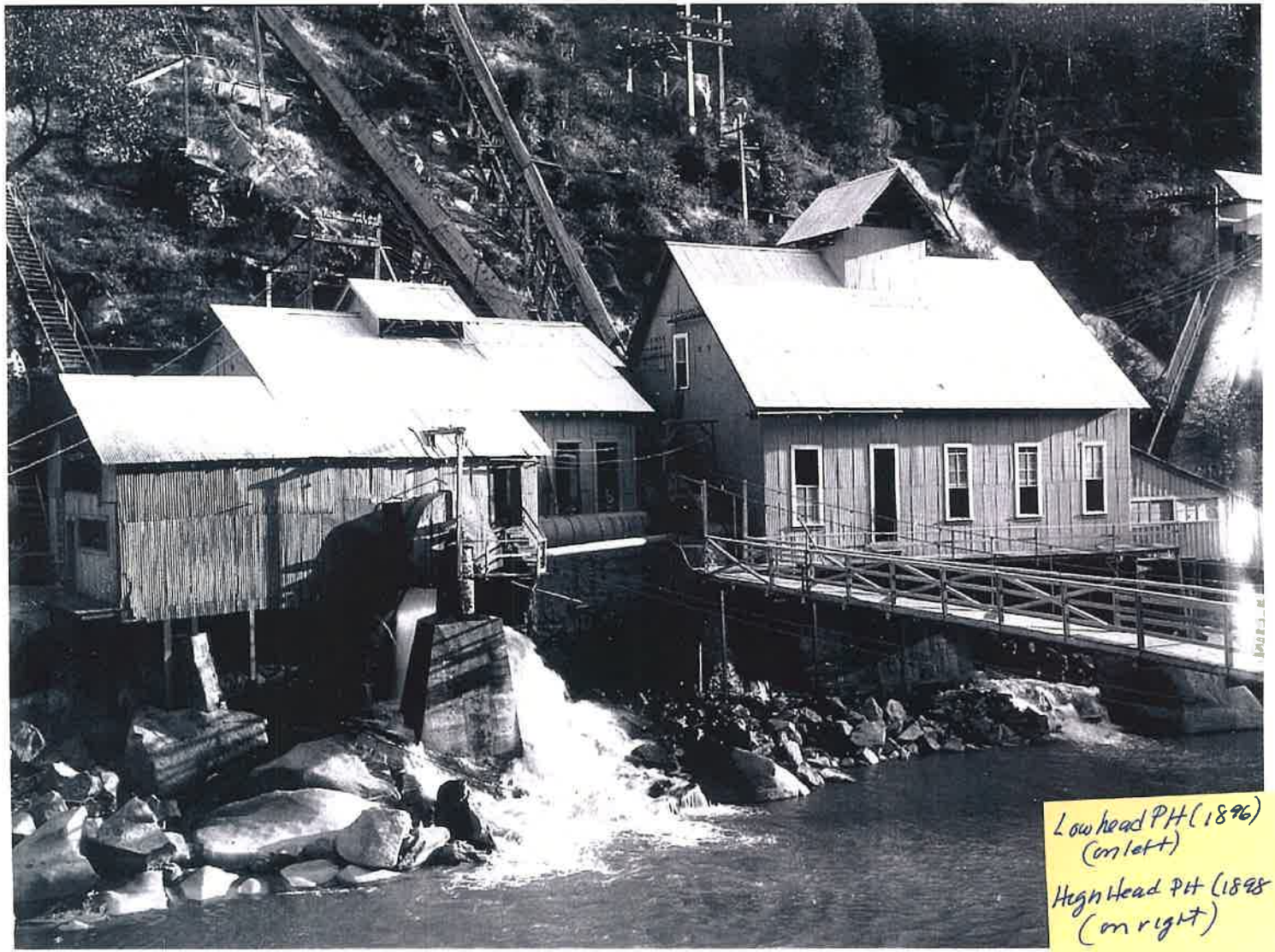


Nevada Powerhouse
1896 (Low Head)
Excelsior dam at
lower left & its
flume at right


Nevada PH Diversion
Dam - x1 1/4 mi above
Purdon Crossing -
Remains shown on
back (outer) Curve.

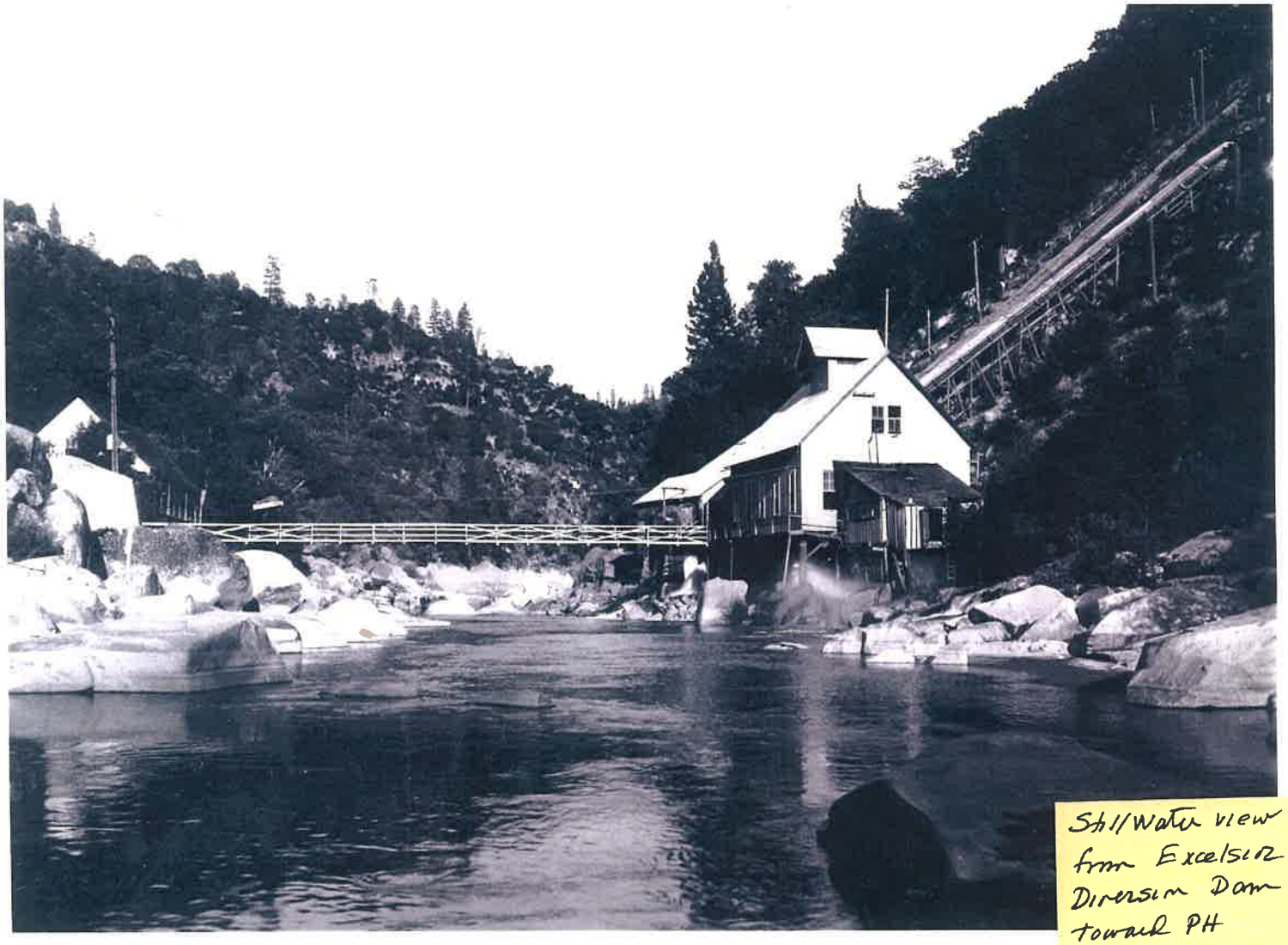


Water Stream shows water fr High Head Source being bypassed
Note old original Living Quarters at Far left

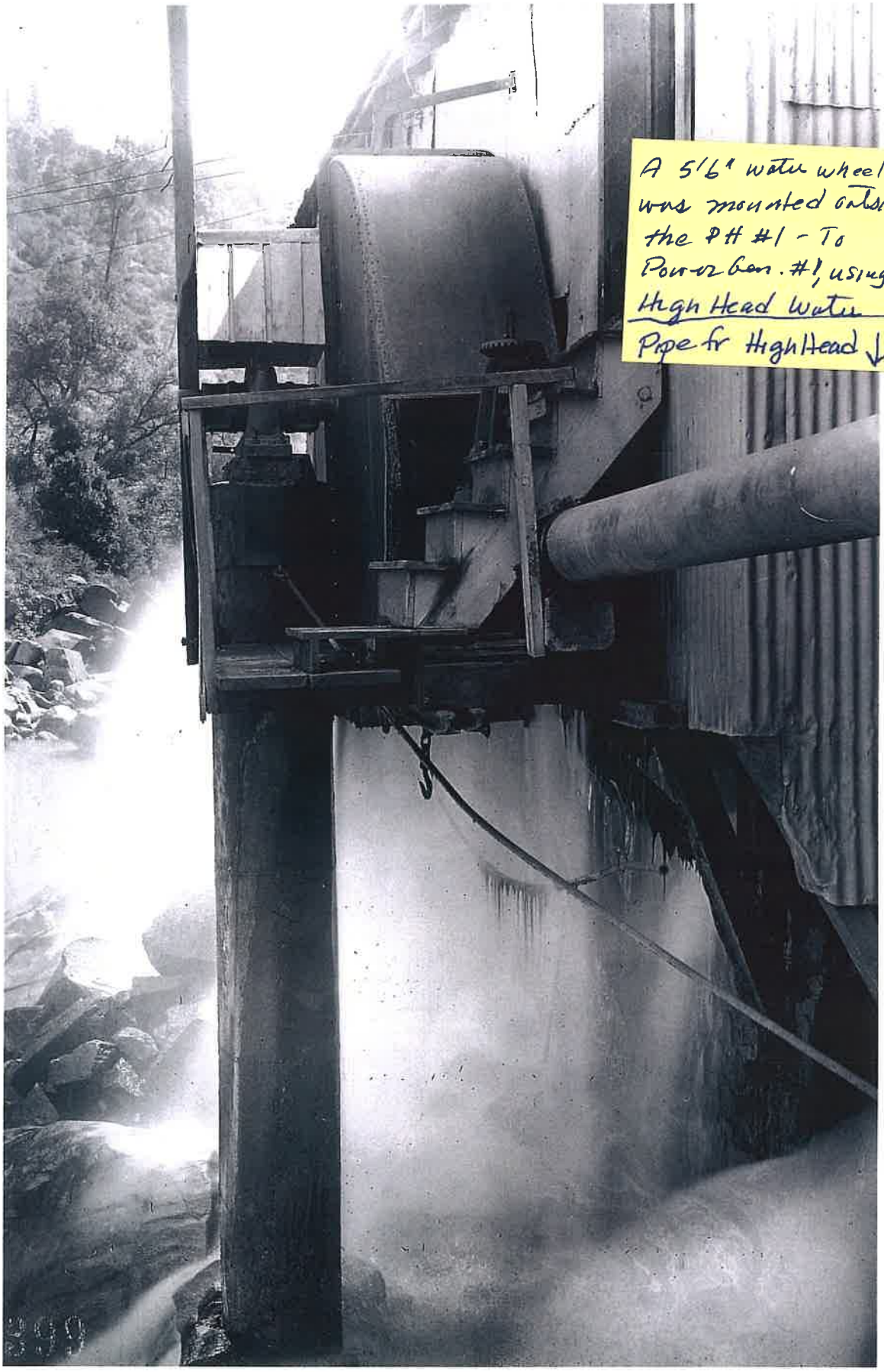


Low head PH (1896) (on left)

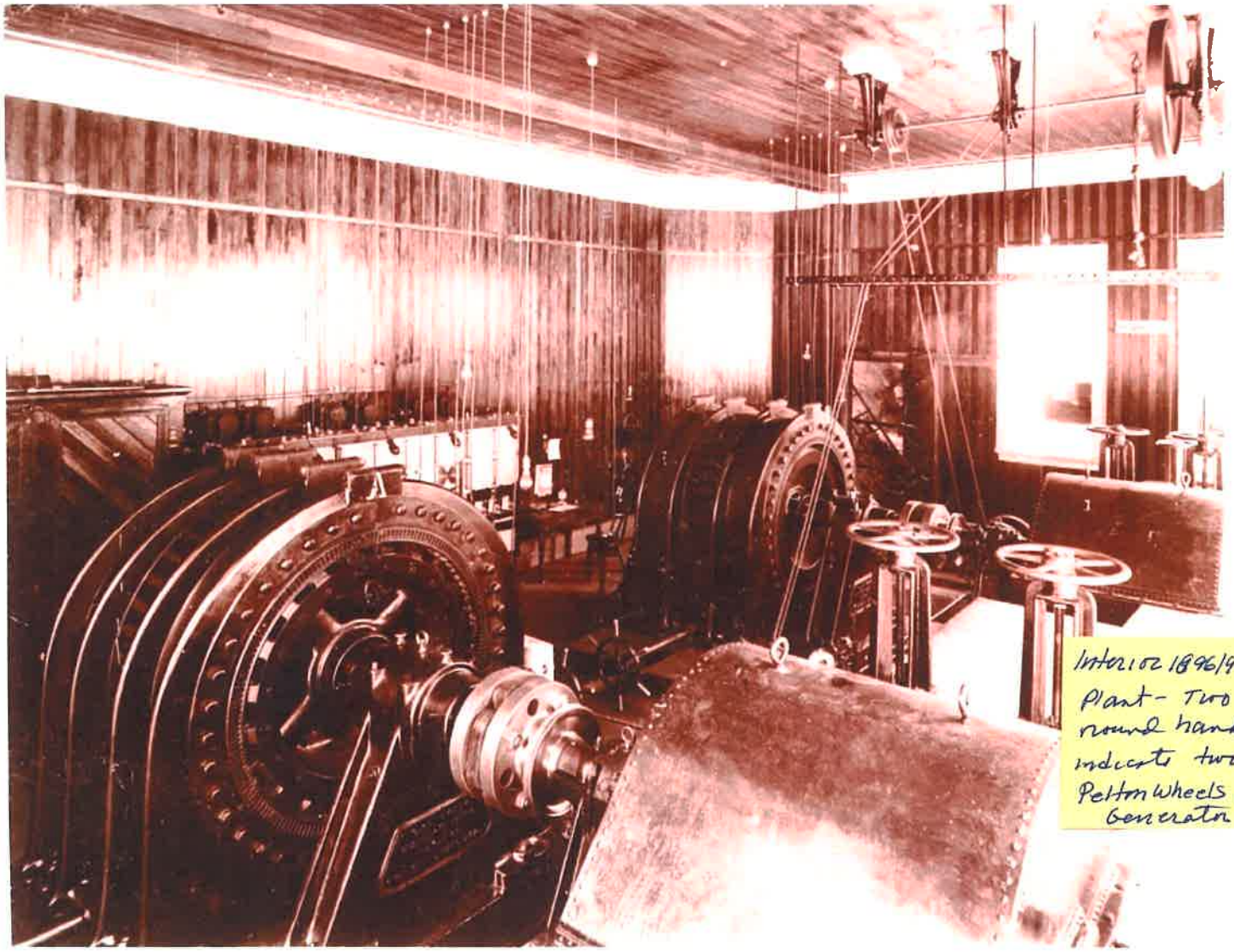
High Head PH (1898 (on right)



Still water view from Excelsior Diversion Dam toward PH



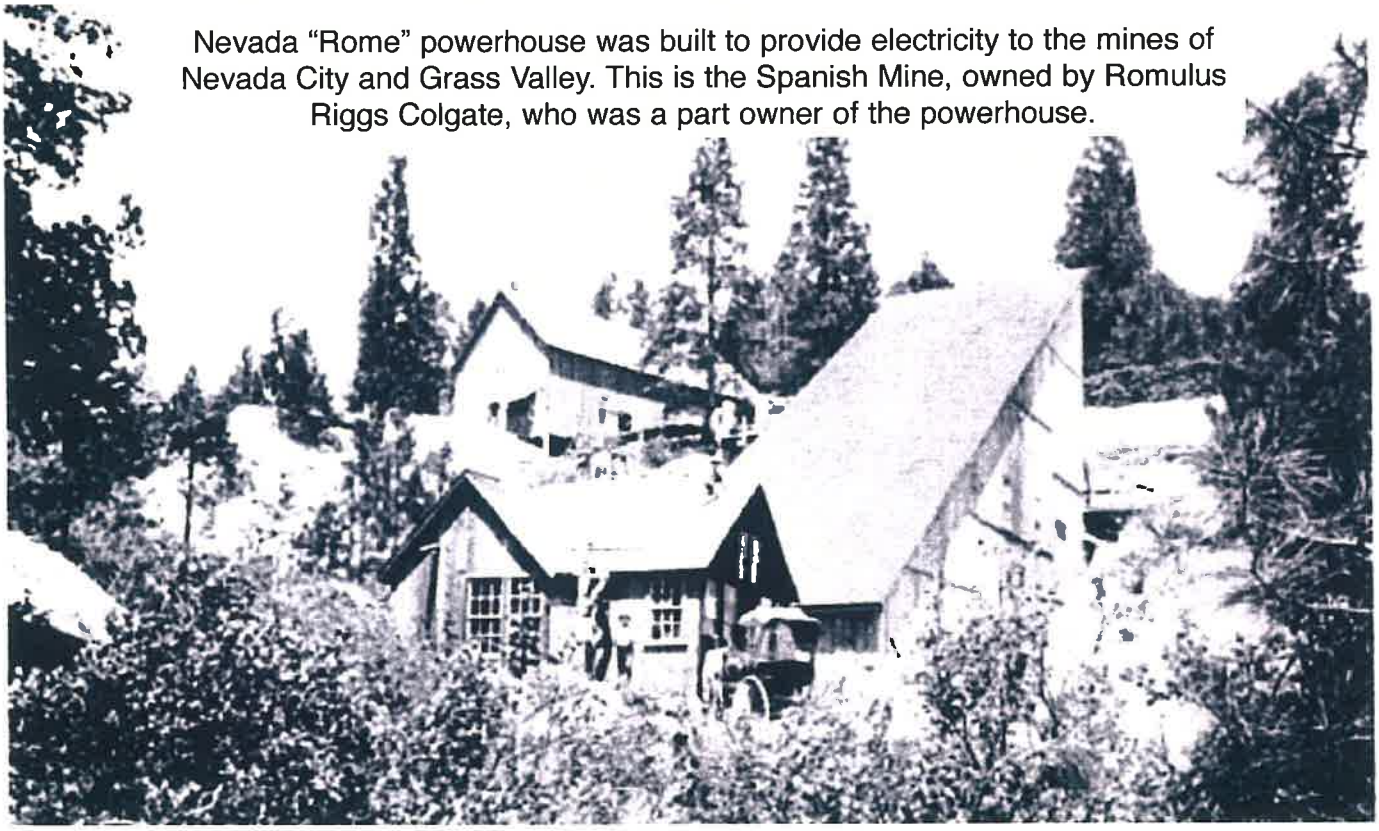
A 5'6" water wheel was mounted outside the PH #1 - To Power Gen. #1, using High Head Water Pipe fr High Head ↓



Interior 1896/97
Plant - Two round handles indicate two Pelton Wheels per Generator

This building is now used as a house.

Power was taken to the Nevada City Substation



Nevada "Rome" powerhouse was built to provide electricity to the mines of Nevada City and Grass Valley. This is the Spanish Mine, owned by Romulus Riggs Colgate, who was a part owner of the powerhouse.

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New ( ) Renewal ( )

Nevada County Historical Society

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FERNE KNIGHT
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DR. RUSSELL A. E. MORLEY
DR. VERNON W. PADGETT
FRED S. PORTER
MISS NAN O'NEIL
SAMUEL P. TRACY
MISS MARY JANE WARNECKE

HE NEVADA HISTORICAL SOCIETY N-O-W
ILANK ATTACHED HERETO AND GET ON THE
FOR THESE BULLETINS AND ENJOY THE
MEMBER HISTORIANS.

JR COUNTY'S IMPORTANT AND ROMANTIC PAST
EVADA COUNTY HISTORICAL SOCIETY

l per year — Payable January 1st each year
ther Hartung, 303 South Church St., Grass Valley
rical Society meets first Thursday of each month except

HE NEVADA COUNTY HISTORICAL SOCIETY:

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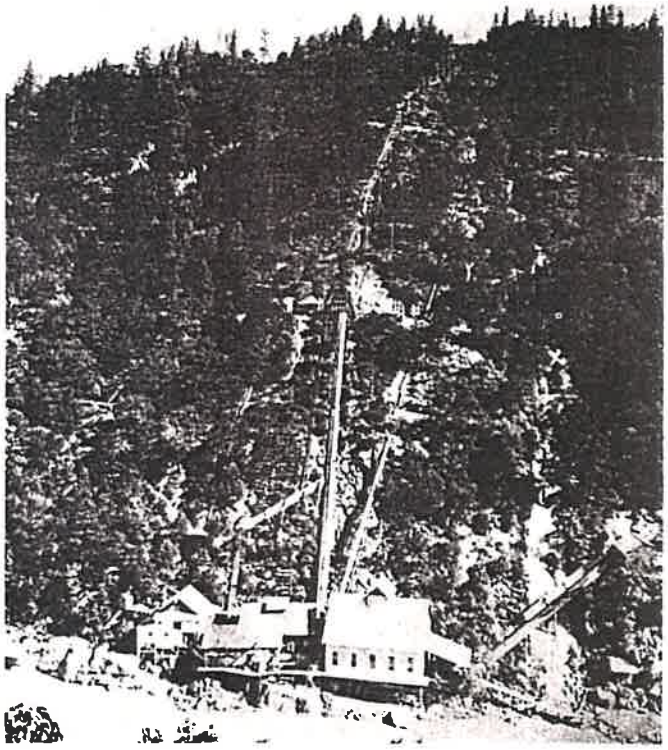
during the Tourist Season and in the winter
ment.

Nevada County Historical Society

Vol. 23 No. 1 JANUARY 1969

A LITTLE POWERHOUSE CALLED "ROME"
1895-to-1910

BY PAT JONES



THE ROME POWER HOUSE.....Built in 1894 on the South Yuba River just above the Excelsior Ditch 4 miles above where the ditch crossed the Downieville Highway. This was one of the first hydro-electric plants in the Sierras. It had two penstocks; one at the end of the ditch below Lake Vera and the other at the lower end of a flume 7 miles long that headed above the Purdon Grade Crossing. Picture from Herb Nile Collection.

(Compiled by Pat Jones from a Story of the Nevada Power Plant written in 1909 by Archie Rice and material provided by the Pacific Gas and Electric CO.

A small powerhouse that once clung to the side of the gorge just above the high water mark of the South Yuba River is important in the history of Nevada County for two reasons.

It made possible the electrical development of many rich mines in the area. It was the nucleus of the Nevada County Power Company, one of the many ancestors of the modern Pacific Gas and Electric Company.

Officially the plant was named the Nevada Power Plant but it was more commonly known as the "Rome" Power Plant. It was so nicknamed for Romulus R. Colgate, grandson of the founder of the Colgate Soap and Perfume Company. He acquired mining properties in Grass Valley and Nevada City and became a strong backer of hydroelectric power.

The idea for the creation of the Nevada Power Plant has been credited to Eugene J. de Sabla Jr., another man closely associated with the development of hydroelectric enterprises and A. A. Tregidgo.

Both owned mining interests locally and were anxious to get electric power for more economical operation of the mines.

Land and water rights to take water by ditch from the South Yuba were acquired. Plans included the selection of a site for a dam and about three miles further downstream a spot was earmarked for a powerhouse.

In 1891 a dam of logs was built across the South Yuba and preparations were made for a ditch and flume system. However, in the spring of 1892 this dam was swept away by high water.

With de Sabla Jr. as manager of the Nevada County Electric Company and Alfred Tregidgo as its superintendent another dam was started August 1, 1895 and it was completed November 20.

This dam was of logs piled crib-fashion and it was bolted firmly to bedrock in the river. It was 28 feet high and measured 107 feet across. (In later years it was fortified with a granite face.)

Alfonso A. Tregidgo, mining expert (left), and Eugene J. de Sabla, Jr., in 1895, while constructing a flume for the Nevada plant of the Nevada County Power Company.

But before the cribs could be filled with rock and gravel balast, the dam appeared to be doomed. The rapid rise in the river forced workmen to abandon the project.

This time the luck was better. Slickens washing down the turbulent stream from hydraulic mines did the job for them. Every chink and cranny was packed solid.

Work on the flume started in July of 1895 and was completed November 28th. The flume was six feet wide and 4 1/2 feet deep. Its construction took a force of 110 men and used 1,250,000 feet of lumber.

This was the full supply of water to the power house for the first two years of its operation.

All the machinery to be used for the Nevada Power Plant had to go by rail to Colfax and then to Nevada City by the Nevada County Narrow Guage.

From Nevada City it had to be transported over old wagon roads. In the early mining days the roads were built on the principle of "get there quick".

Before the equipment could be hauled to the powerhouse site, three miles of road had to be widened in places and improved. Big teams, many of them consisting of 12 horses, were used to haul the heavy pieces of machinery up to the edge of the slide above the powerhouse.

Each generator weighted 11,200 pounds. Men with stout cables and heavy hawsers carefully lowered the valuable machinery down hill on slides mounted on log rollers. Large tree stumps were used as capstans.

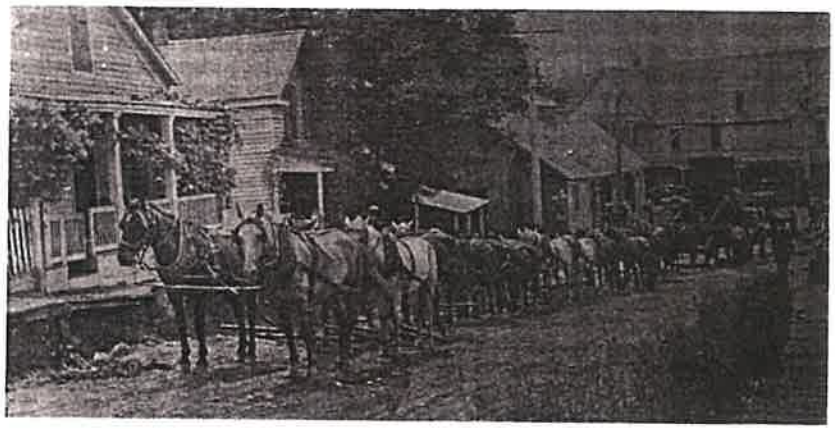
So little room was provided by the edge that had been scopped off for the plant that the boarding house had to be placed on the opposite side of the stream. A suspension bridge connected the two buildings across the river.

Water pipes were laid and anchored to the slide above the powerhouse to carry flume water down to operate the equipment.

For the original installation there were two 300 kilowatt, 133 cycle two-phase Stanley, inductor type generators. They made 400 revolutions a minute and generated at 5,500 volts. Each was directly connected to three foot Pelton impulse wheels.

Three of these Pelton Wheels were used in one generator and four on the other. Each of the seven wheels had two nozzles and the two generators together developed approximately 800 horsepower.

Hauling transformers and other electrical machinery to the Power House from Nevada City.



The first switchboard consisted of open-air, automatic circuit breakers. They were supposed to break the circuit but they sometimes failed and provided fine displays of fireworks.

From the switchboard the two phase lines were carried out through the end of the powerhouse to an eight mile pole line ending at Grass Valley and having a midway branch to Nevada City.

This line ran in a cleared right-of-way 60 feet wide. Poles cut from the right-of-way and rising 30 feet above the ground were used.

On them were crossarms with triple-petticoat white porcelain insulators manufactured by the Locke Company.

While the plant was being built, Grass Valley and Nevada City were lighted by a system owned by Kaskill Casper, a Nevada City clothing merchant whose business was on Pine Street. In 1892 Casper began operating a small water powered generator to serve Nevada City. He later sold it to John Glasson, head of an older gas and electric company.

A larger hydroelectric plant was built on Deer Creek to meet the growing demand for electricity. In 1896 the Nevada County Power Company purchased the plant and operated it for three years.

Even more capacity was needed. On March 1, 1898, a crib dam 54 feet high and 327 feet across was started in Rock Creek to flood a partially excavated basin that had been the scene of hydraulic diggings.

It was completed November 27th. This reservoir area of approximately 42 acres was named Lake Vera for one of de Sabla Jrs. daughters.

A viaduct was built to convey the lakes water a distance of 2 3/4 miles to a small forebay on the hillside above the Nevada Powerhouse.

From the forebay water shot down a 20 inch steel pipe to additional impulse wheels installed in the original plant.

On April 2, 1905, a part of the dam on Lake Vera gave way. After its repair the dam was about 12 feet lower and the capacity of the lake dropped.

The cntract for the construction of the dam on the South Yuba, the flume and "Rome" Plant was given to John Martin, California agent for the Stanley Electrical Manufacturing Company.

The actual supervision oi the construction of the dam and flume was left to Alfred Tregidgowho was the company's first operating supintendent.

Meanwhile de Sabla Jr. was canvassing the area for customers. The WYOD, THE Homeward Bound and the Gold Hill mines in the Nevada district were the first to use the power.

They were followed by the Pennsylvania, the Brunswick, the Allison Ranch and the North Star in the Grass Valley district and then by the Mountaineer in the Nevada district.

No mine that installed a motor to take electric power ever abandoned its use unless the mine itself closed for some other reason.

On September 1, 1900 the Nevada County Power Company combined with the Yuba Power Company to form the beginning of the Bay Counties Power Company.

A historically significant sidelight concerns the Colgate Power Plant of the Yuba Electric Company that was placed in operation September 5, 1899. It was the first powerhouse to serve San Francisco Bay Area with hydroelectric power.

The Colgate plant was damaged by fire in 1946 and replaced in 1949. It was abandoned during 1968 as a result of an agreement signed two years previously with the Yuba County Water Agency and the Bullards Bar Project.

The Bay Counties Power Company formed by thecombinedNevada and Yuba county companies in 1901 grew until March 1, 1903 when its possessions with others were merged into the California Gas and Electric Corporation.

On January 2, 1906 this corporation came under the control of the Pacific Gas and Electric Company.

The Nevada Power Plant was retired from service in 1910, having become obsolete.

For the entire fascinating story of Nevada County's contribution to the development of hydroelectric power read P.G.&E. of California: The Centennial story of Pacific Gas and Electric Company by Charles M. Coleman, McGraw Hill Book Company, Inc. 1952.

NEVADA COUNTY ELECTRIC POWER CO.

Among the many worthy enterprises inaugurated in Nevada County during the year, none is more worthy of consideration at the hands of mining men than that being pushed forward by the above-named corporation. This company was incorporated September 20, 1892, and among its stockholders are some of the best known citizens of San Francisco. The works of the company are located near Purdon's crossing of the South Yuba River, six miles above Nevada City, on the North San Juan Road. The object of the company is to divert the waters of the South Yuba for the purpose of generating electricity to be transmitted to Nevada City and Grass Valley, there to be used for power and lighting purposes. The company has had a very large force of men at work building the dam and flume, and will be ready to furnish power at about one-half the cost of steam power, some time before the first of November. The flume will be 18,4co feet in length, six feet wide and five feet deep, capable of carrying 6,000 inches of water, which with the fall the company will have, will enable them to generate and transmit about 3,000 horse-power. The power house will be located on the river, below the lower end of the flume, where a fall of over 200 feet can be obtained. Two five-hundred-horse-power generators will be installed immediately, and these will be added to at such times as may be found necessary. The directors of the company are: C. A. Grow, D. B Davidson, Wm. M. Pierson and E. J. de Sabla, Jr., of San Francisco, and Alf. Tregidgo, of Nevada County, the latter being the efficient superintendent. Wm. M. Pierson is president, C. A. Grow, treasurer and secretary and E. J. de Sablo, Jr., vice-president and general manager, to whom application should be made for contracts for the furnishing of power, or for any business connected with the company. At the present writing (September 6, 1895) the work has progressed to such a point as to insure the completion of the entire plant during the month of October. The dam is well under way and the flume is over two-thirds built. Both of the generators have been shipped from the Stanley Electric Works, at Pittsfield, Mass., and are daily expected. The pole line construction is also being rapidly completed, all the wire, about twenty tons, now being on the ground. The works have an elevation of 1,700 feet at the dam and 1,400 feet at the power house, which, being well below the snow line, is a guarantee that, coupled with the very substantial works that are being put in, a perpetual power can be obtained and supplied to the mines during all seasons, and will not be affected by the severe winters which have compelled our mines to shut down in former years. The engineers of construction are Messrs. W. F. C. Hasson, Andrew M. Hunt and W. R. Eckart, of San Francisco. Applications for power can be made at once and a guarantee will be given that all contracts will be fulfilled.

NEVADA COUNTY MINING REVIEW

The above documentation was taken from the Nevada County Mining Review published in 1895 by W. F. Prisk and the pictures were reproduced from the Centenial Story of the P.G.&E. published in 1952. The site of the Rome Powerhouse was three miles northwesterly from Lake Vera, now a recreational area a few miles north of Nevada City. Access to the power house site now abandoned is via the Cement Hill road or by hiking upstream from the South Yuba Bridge on Highway 49. The location is historically referred to as between Hoyt's Crossing and Purdon Crossing on the South Yuba River.

C. H. Lee, Editor.

In Memoriam

HARRY L. HYATT
FERNE KNIGHT
WILLIAM W. MORGAN
DR. RUSSELL A. E. MORLEY
DR. VERNON W. PADGETT
FRED S. PORTER
MISS NAN O'NEIL
SAMUEL P. TRACY
MISS MARY JANE WARNECKE

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FILL IN THE BLANK ATTACHED HERETO AND GET ON THE MAILING LIST FOR THESE BULLETINS AND ENJOY THE FELLOWSHIP OF MEMBER HISTORIANS.

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Membership only $1 per year — Payable January 1st each year

Send $1.00 to Esther Hartung, 303 South Church St., Grass Valley

The Nevada County Historical Society meets first Thursday of each month except June, July and August.

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Secretary: Esther Hartung 303 S. Church St. G.V. 273-6830
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Bulletin Editor: Clinton H. Lee, Nevada City

VISIT - The Nevada County Historical Societies MINING EXHIBIT in Grass Valley and MUSEUM in Nevada City. Open regularly during the Tourist Season and in the winter by appointment.

10 Room Boarding House on North Side of River

HISTORIC PLANT TO BE DISMANTLED

Rome Power House Closed Down After 15 Years of Constant Use.

HAS FIGURED PROMINENTLY IN ELECTRICAL WORLD

Was Nucleus of Companies Now Supplying Many Cities and Towns of State.

Special to the Union.

NEVADA CITY (Nevada Co.), Oct. 29.—Yesterday the Rome power house was closed after a continuous run of fifteen years, and it marks an interesting epoch in the electrical development of California. It is a matter of general knowledge that the Rome power house was the first power plant of any pretensions in the state, and the fact that it has been closed and will soon be dismantled adds a chapter to the rapid development of electricity as a means of power.

This power house was built in 1895 by John Martin, the well known capitalist who was at that time agent for the Stanley Electrical Manufacturing company of San Francisco. In company with Eugent DeSabla he conceived the idea of building the power house, and Alfred Tregidgo sold the stock after organizing the company. Tregidgo received a large block of the stock for his services and might have been very wealthy if he had not disposed of it. Martin and DeSabla from the small beginning at the Rome power house built up the immense concern that finally developed into the Bay Counties Power company and the Pacific Gas and Electric company.

Under the new system of transmitting power, which went into effect yesterday when the system was changed over, power may now be transmitted from any one plant to another by a simple process. The plant in Butte county may be called upon to furnish lights for the other counties if the Colgate plant is out of commission, or the plant in Amador county may be used if the Butte plant and Colgate plants are wrong. In this way it is a great convenience and means a great deal to the company.

Copy of Original
1895 Prospectus

PROSPECTUS

OF THE

Nevada County Electric Power Co.

1895

THE Company is duly organized under the Laws of the State of California.

CAPITAL, - - $500,000.

100,000 Shares, - - - - $5.00 each.

BOARD OF DIRECTORS:

WM. M. PIERSON, ESQ., San Francisco.
D. B. DAVIDSON, ESQ., San Francisco.
C. A. GROW, ESQ., San Francisco.
E. J. DE SABLA, JR., ESQ., San Francisco.
ALF. A. TREGIDGO, ESQ., Nevada County.

ATTORNEYS FOR THE COMPANY:

MESSRS PIERSON & MITCHELL, San Francisco. FRED. SEARLS, Nevada City.

ENGINEERS OF CONSTRUCTION:

W. R. ECKART, C. & M. E. W. F. C. HASSON, E. & M. E. ANDREW M. HUNT, E. & M. E.

Office of the Company, Room 8, 40 California St., San Francisco.

Proposed Plan.

It is proposed to dam the South Yuba River, and divert the water at the dam site, and construct an aqueduct capable of carrying 4200 miner's inches of water, on a grade of ten feet to the mile, for a distance of three miles.

This quantity of water, under a head of 250 feet, will give 2500 h. p. on Pelton wheels, which it is estimated will be quite sufficient to supply all future demand. The pipe to convey the water from the penstock at the end of flume to the receiver at the power house will be made accordingly.

Of the 2500 available h. p. at the power house, it is proposed to transmit 550 to Nevada City and Grass Valley immediately, and to generate and transmit the remainder as it is demanded.

BOND ISSUE.

The Company is duly authorized to issue $200,000 of 20 year 7% 1st mortgage construction bonds.

TRUSTEE.

Mr. D. B. Davidson is the Trustee for the bondholders until such time as the plant is in operation, when the Trustee will be the Union Trust Company of San Francisco.

AMOUNT OF BONDS FOR SALE.

In order to carry out the proposed plan of construction, $60,000 is required. The Company propose to sell $60,000 of these bonds at par.

DENOMINATION OF BONDS.

Bonds will be issued of such denomination as will meet the requirements of the subscribers.

SUBSCRIPTIONS TO BONDS.

Subscriptions for bonds will be received by the Trustee, D. B. Davidson, Esq., at the Nevada Bank of San Francisco, until July 1st, at noon. The full amount, viz., $60,000, must be subscribed before any bonds are issued or payment demanded.

BONUS.

A bonus of 500 shares of the Capital Stock of the Company will be given to each purchaser of $1000 of bonds.

PROFIT TO STOCKHOLDERS.

After having made the power available to generate 2500 h. p. at the power house, the profit on the transmission of 550 h. p. to market will be as follows: taking as a basis that the Company dispose of that amount for one-half what it costs the consumer at present for steam power:

550 h. p. at $75 per annum,		$41,250 00
Running expenses,	$10,000 00	
Wear and tear,	1,000 00	
Sinking fund, 5%,	3,000 00	
Interest, 7%,	4,200 00	
Extras, taxes, etc.,	1,050 00	
		19,250 00
Profit on the sale of 550 h. p.,		$22,000 00

Dividend to stockholders on the sale of 550 h. p. 1st year, - - - 20c. per share.

(or 4800 cubic feet), having been always full and a large quantity overflowing their dam. By referring to the cut showing the Company's proposed power house, it will be seen that our water is returned to the River above the Excelsior Company's dam.

PROPERTY.

The Company own 400 acres of land, situated on the banks of the South Yuba River, through which the aqueduct will pass, and over this property the county road from Nevada City to Sierra County crosses. Nevada City is connected by rail with the Central Pacific at Colfax, thus facilitating transportation to the works.

REPORTS.

Reports have been made by prominent engineers upon this enterprise, and can be seen, with accompanying maps and diagrams, at the Company's office.

MARKET FOR POWER.

The amount of power now in use in the mines of Grass Valley and Nevada City is estimated to be in the vicinity of 2500 h. p., of which about 1000 h. p. is generated by steam, the balance by water power. In addition to this there are at present idle a large number of mines which are unable to work on account of the high cost of power generated by steam, and that are so situated that they cannot use water to advantage. The amount of this idle power is estimated at about 1500 h. p., of which the greater part will take advantage of the introduction of electricity.

It will be seen by reference to the accompanying diagram the great advantage of the Company's location, as from the dam to the power station, a distance of three miles, the natural bend of the river is southerly, thus saving *two* miles in the length of the wire, and consequently shortening the distance that the power is to be transmitted.

The course of the pole line is designated by the line starting at the power station, and running to 1, thence 2, 3, 4, 5, 6, 7.

Each square in the diagram represents a section one mile square.

1. Group of mines on Deer Creek, one-half mile west of Nevada City, comprising the Nevada City Mine, Wyoming, Spanish, Champion, Merrifield, Home, Mountaineer, Providence, etc,, etc. This will be a distributing point, and from it will be switched sufficient power to supply Nevada City with electricity, and mines east of Nevada City.

2. Town Talk Summit being the highest point on the high-road between Nevada City and Grass Valley, also the summit on the N. C. N. G. R. R. Here will be erected a 50-arc light dynamo to light with electricity the Nevada City and Grass Valley wagon road, and from this point power will be transmitted to the Gold Flat, Merrimac and Pittsburg mines.

3. The Idaho, Maryland group of mines.

4. The Empire, W. Y. O. D. and Pennsylvania group. From this point power will be transmitted to Osborne Hill, Conlan, Laffayette, Centennial, Green Mountain and other mines, taking in all properties lying in a southeasterly direction from Grass Valley.

5. The Omaha and Lone Jack group. From this point power will be distributed southerly to the celebrated Allison Ranch Mine, taking in the Illinois, Wisconsin, Hartery and other mines.

6. The North Star Mine.

7. The Peabody Mine, taking in on its route the Rocky Bar, New York Hill, Hudson Bay, Tribute, Massachusettt Hill, Stockbridge, Scadden's Flat and Gold Hill. From 7 the line will pass through Grass Valley townsite and return to 1, thus completing the circuit and taking in a market for power that is unsurpassed in the United States at so short a distance from the point of generation.

VIEW 1.
Shows the South Yuba River at extreme low water. This is the location where the dam will be constructed and the water turned into the flume.

BONDHOLDERS' EARNINGS.

Dividend of 20c. on 500 shares, - - - - -	$100 00
Interest on $1000 bond at 7%, - - - - - -	70 00

making an income on a $1000 investment of - - - - - - $170 00 per annum, or 17%, besides having 500 shares of the Capital Stock that will yearly be increasing in value.

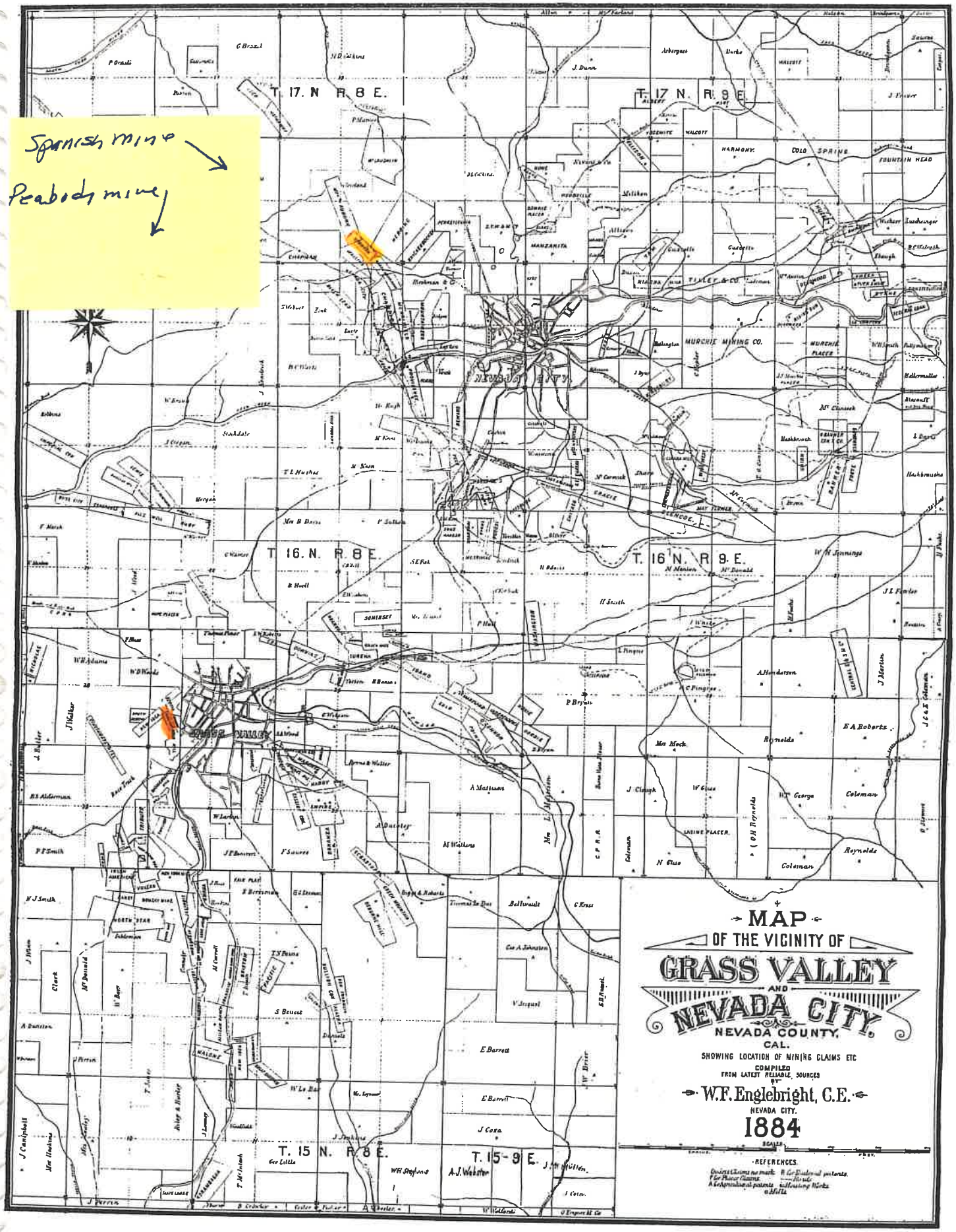
SURPLUS.

The Company holds $140,000 of bonds in trust, to be disposed of when it is deemed necessary or advisable to increase the capacity of the electrical transmission, thus providing against any assessment and insuring regular dividends.

Cost of Material and Construction in Detail.

DAM.

The dam will be made of logs securely bolted to the bed rock, and constructed with an overhanging crest. The object of this dam is not to store water but to divert it from its natural course and turn it into the flume. The site is so favorable that a good substantial dam could be properly built of logs, and the entrance to flume well protected, for - - - - - $3000.


Spanish Mine
Peabody mine
T. 17. N. R. 8 E.
T. 17 N. R. 9 E.
T. 16. N. R. 8 E.
T. 16 N. R. 9 E.
T. 15 N. R. 8 E.
T. 15 N. R. 9 E.
NEVADA CITY
GRASS VALLEY
MURCHIE MINING CO.
MAP
OF THE VICINITY OF
GRASS VALLEY
AND
NEVADA CITY
NEVADA COUNTY,
CAL.
SHOWING LOCATION OF MINING CLAIMS ETC
COMPILED
FROM LATEST RELIABLE SOURCES
BY
W.F. Englebright, C.E.
NEVADA CITY.
1884
SCALE
REFERENCES.

The Old Nevada County Electric Power Company

A. A. Tregidgo — Eugene de Sabla, Jr.
A. M. Hunt — E. E. Stark
Jno. Martin

Grass Valley and Nevada City, a distance of about six and one-half miles. The central and highest point of this line is scarcely five miles from the power station and the line is practically a continuation of the one running to the mines near Nevada City.

There are at present two petitions before the Board of Supervisors for franchises to construct tramways along the county road between the two towns. Either of these lines will be but four miles in length, and the Operating Company will depend upon this Company for power.

PRESENT COST OF POWER.

Power generated by water costs from $100 to $[illegible] per H. P. per annum. When generated by steam it costs $150.00.

Mines, requiring in the aggregate 1,250 H. P. that could be worked profitably with power not costing more than $90 per Horse Power, per annum, are now being idle.

WORK NOW IN OPERATION.

Immediately after organization the Company commenced the construction of the dam on the South Yuba River.

The dam is to be fifty-seven feet long at the base and one hundred and fifty-one on top. Its height is to be twenty-seven feet and ten inches.

The remainder of the work will be pushed to a rapid completion.

STOCK, ETC.

The capital stock is $500,000 divided into 100,000 shares, $50 each—all to be fully paid up.

The total investment it is estimated will be about $300,000; and the net income is estimated at $140,000.

The facts that the power exists—the demand for it is at hand—that the distances are small requiring comparatively small expense for copper, together with the permanency of the water power, renders this a most advantageous investment.

First operator to second, who is ambitious to learn, and eventually get on steady at one of the water power plants: "Do you know what a heavy short does at the Rome Power House?"

Second operator: "No. What does it do?"

First operator: "Makes Rome Howl, of course."

T. E. Fogalsang.

A. J. Tregidgo, M. E., President
Eugene J. de Sabla, Jr., Vice President

J. H. [illegible], Secretary

Dr. H. H. Clark, General Manager

Nevada County Electric Power Company,

PRINCIPAL OFFICE, Grass Valley, Nevada Co.

LOCATION OF WORKS, Nevada County, California.

Remains of Nevada Pit Diversion Dam

Locally known as "China Dam" → there is no known reason for this name — in my opinion