

INTERVENING PETITIONERS' EXHIBIT

UPON THE SALE OF WATER PROPERTIES OF

FORBES LAKE AND WASH COMPANY

TO THE CITY OF SAN DIEGO

MAY 15, 1918

EXHIBIT 11

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FOURMAN LAND AND WATER COMPANY

TO THE CITY OF SAN DIEGO

MAY 15, 1914

EXHIBIT "A"

May 22, 1914.

To the Honorable Members
of the City Council, and
San Diego Water Commission.

San Diego, California.

Gentlemen:

As per our understanding at the last meeting,
we submit the following proposition relative to the purchase
of our water system.

The Volcan Land and Water Company holdings which we
agree to deliver include the following: All surveys, engineering
reports, water filings, water measurements, etc. This data
alone during the last seven years has cost us approximately
\$200,000. The other properties included are:

1st

WARNER'S DAMSITE

Warner's Damsite and 2960 acres of land that will be
flooded. The development work at the damsite has cost us
approximately \$75,000, and includes the following: Concrete
cut-off wall to bedrock constructed the entire width of the dam;
1080 feet outlet tunnel completed; conduit; engineer's residence,
(one acre); roads; telephone lines, etc. We consider the 2960
acres of valley land in the Warner's Ranch damsite easily worth
\$100 an acre, or 296,000. The Railroad Commission

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acres of valley land in the Warner's Ranch damsite easily worth
\$100 an acre, or 296,000. The Railroad Commission

of the State of California on the physical valuation basis, gave the Cuyamaca Water Company a valuation of \$86 per acre for all its lands at Cuyamaca Lake; Murray Hill Reservoir lands \$150 per acre; La Mesa Reservoir lands \$100 per acre and the Eucalyptus Reservoir lands \$100 per acre. The lands flooded in Warner's Reservoir are, as you know, all rich bottom lands, and the damsite itself is extremely valuable on account of its natural possibilities and elevation for the impounding of flood waters, for power, irrigation and domestic use.

2ndSAN LUIS REY RIPARIAN RIGHTS

With the exception of the City of Oceanside riparian rights, which consists of the ownership of 6 acres of land, we will furnish all riparian rights of diversion of the Warners water into other watersheds, that may be attached to lands below Warner Reservoir, for 45 miles and to the ocean, through which the San Luis Rey River may flow. There are only six of the above riparian rights that we have not acquired, but these rights will be secured at our own expense. It has taken seven years to acquire these rights and has cost several hundred thousand dollars. We are of the opinion that the riparian rights of diversion could not be condemned in court today at a less cost to the city than \$500,000.

3rdRIGHTS OF WAY FROM WARNER'S DAM TO PAMO,
OR SUTHERLAND RESERVOIR

We will furnish clear title to all rights of way, including the forebay for the power drop into Pamo Valley and sufficient land for a power station as well. Our engineers estimate that at least 5000 horsepower of electricity can be developed by using the Warner's water alone, and approximately an additional 1000 horsepower from the Sutherland Reservoir.

In case the water from the Warner's Dam is desired to be conducted into Sutherland Reservoir and from Sutherland Reservoir into the San Diego River at the Diverting Dam, thence to the City of San Diego, practically the same horsepower of electricity can be developed only it will be in two units instead of one, the 500 ft. drop being made into the Sutherland Reservoir from Warners and a 1000 ft. drop from Sutherland Reservoir into the Diverting Dam Reservoir.

4thPAMO DAMSITE

Pamo damsite and 682 acres of land that will be flooded. At Pamo we have spent between \$30,000 and \$40,000 in excavations in side walls and borings to determine the location of bed rock, construction of roads, etc. We are pleased to say that all reports are favorable and we have demonstrated that bedrock is in place, which will permit a concrete dam to be built if desired, and to any reasonable height.

5thSUTHERLAND DAMSITE

This includes the damsite and 434 acres of land, the total amount that will be flooded. Bedrock is exposed.

6thPERMIT FROM U. S. GOVERNMENT

Permit for diversion of water from Black Canyon to increase the supply of Sutherland Reservoir.

In case the water from the Warner's Dam is desired to be conducted into Sutherland Reservoir and from Sutherland Reservoir into the San Diego River at the Diverting Dam, thence to the City of San Diego, practically the same horsepower of electricity can be developed only it will be in two units instead of one, the 500 ft. drop being made into the Sutherland Reservoir from Warners and a 1000 ft. drop from Sutherland Reservoir into the Diverting Dam Reservoir.

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PERMIT FROM U. S. GOVERNMENT

Permit from the U. S. Government to divert water from Sutherland Reservoir through the Santa Maria Valley. The waters of Warners and Sutherland reservoirs can be diverted into Santa Maria Reservoir, or thru the Santa Maria Valley to the Diverting Dam, and thence to the City thru the Cuyamaca system, if desired.

8th

SANTA MARIA OR ALVERSON DAMSITE

Santa Maria or Alverson damsite and 80 acres of land in the Santa Maria Reservoir. There are two possible damsites at Santa Maria; one known as the Alverson damsite on the 80 acres that we control.

9th

CARROLL DAMSITE and 863 acres that will be flooded.

Bedrock is exposed. By building a dam here, an additional drainage area of 110 sq. miles below Pamo will be available as well as the saving in cost of practically all the riparian rights on the river.

10th

SAN CLEMENTE DAMSITE

The San Clemente damsite and 218 acres flooded. Excepting in the matter of the Santa Maria reservoir site, our offer to you is to furnish free and clear of encumbrances a clear title to all damsites and lands flooded, excepting existing rights of way for public roads. There are some small pieces of land in the reservoir sites that we do not own yet, also a few rights of way and riparian rights on the San Luis Rey River and

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it will be necessary for us to buy or condemn same at our own expense, but we reserve the right to ask the City to condemn these lands and riparian rights and we pay any judgment and all costs excepting attorney's fees. All data engineering reports and records of the Volcan Land and Water Company will be included.

The writer particularly desires to call your attention to what he considers a very important matter and possibly of great advantage to the City in case the City ever took over the Cuyamaca System. By building a large concrete conduit and pipe line from the Diverting Dam of the Cuyamaca Water Company to Chollas Heights Reservoir, the City, at any time, by building the conduit line from Warners to Sutherland Reservoir and from Sutherland Reservoir thru the Santa Maria Valley to the Diverting Dam, will be able to place into Lower Otay any excess flood waters from the San Luis Rey, the Santa Ysabel or the San Diego Rivers. This materially increases the value of the present San Diego water system acquired from Mr. Spreckles, as it would mean filling without fail each year the Otay Reservoir with flood waters if needed.

The purchase price of the property of the Volcan Land and Water Company is \$2,500,000, as of date May 1, 1914, to which is to be added any moneys expended thereafter, and this price will hold good until cancelled by written notice. Providing it is deemed advisable to purchase these properties and bonds are voted we will accept in payment, 4% bonds at par and accrued interest.

Attached hereto is our letter of May 15th, giving the cost in detail of the construction of a portion of the Volcan Land and Water Company System.

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Attached hereto is our letter of May 15th, giving the cost in detail of the construction of a portion of the Volcan Land and Water Company System.

In submitting this suggestion, by which the City can obtain this water at a minimum cost and minimum burden, we beg leave to call the attention of your Honorable Body to the fact that although we have assumed, at your suggestion, \$1,750,000 or possible \$2,000,000 under your own plans and specifications, this will be satisfactory to us.

The point that we desire to call your attention to is that it will all be financed by the Volcan Land & Water Company, thus relieving the city of providing any further money beyond the initial payment of \$1,500,000. To put it another way, this means that by voting \$1,500,000 in bonds, the City of San Diego is guaranteed of at least ten million gallons of water per day, delivered to University Heights Reservoir in the City of San Diego, also securing the entire control of the flood waters of the San Luis Rey River and Pamo and Bernardo River with an average runoff the last 10 years in excess of 50 million gallons of water per day, year in and year out.

As your Honorable Body knows, the Volcan Land & Water Company desires an early decision as these negotiations have been pending since December 1st, 1913, and what is proposed in our communication of May 15th, 1914 is merely to expedite matters and do everything we can to hasten an immediate decision.

The writer hopes that your Honorable Body will take prompt and favorable action on this matter, so as to preclude the possibility of these properties being acquired by others who are now considering the purchase of same.

Respectfully submitted,
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By (Ed Fletcher)
Manager.

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To the Honorable City Council,
and Water Commission.

City of San Diego, Calif.

Gentlemen:

We have been requested to suggest to your Honorable Board what, in our opinion, would be the simplest method involving the least amount of money and burden to the City of San Diego to acquire the so-called Warner and Fann Waters.

The suggestion is as follows: That the City enter into a contract to purchase all the water rights, dam sites, reservoir sites, etc. etc., as set forth in our communication to you April 30th, 1914, excluding the holdings of the Cuyamaca Water Company, for \$2,500,000. On this contract the city should pay at this time \$1,500,000 by the issuance of bonds.

This leaves \$1,000,000 still unpaid, and it is estimated that it will require \$1,500,000 to construct the Warner dam, the Carroll Dam, and the necessary tunnels and aqueduct connections; also including the large steel pipe line that will be necessary to connect the Carroll Dam with the University Heights reservoir in the City of San Diego. This estimated amount of \$2,500,000 could be placed as a bond issue upon the property.

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Water Commission of San Diego:

The above mentioned contract with the city will provide that the city has a right to purchase at any time (to be agreed upon), say five, ten, fifteen or twenty years, at which time by the payment of sufficient amount to extinguish the \$2,500,000 bonds, they become the owners of the entire system.

Further, the contract to provide that the city will pay for water at a given price and to reserve the right of disposal of the water to outsiders. The price that the city agrees to pay for the water to be only sufficient to carry the fixed charges of interest on the bonds, operating expenses, etc., etc.

The contract to further provide that no dividend shall be paid upon the stock, but any money in the treasury would be devoted to betterments, improvements and extensions under the direction of the City of San Diego.

The contract to further provide that the amount of \$1,500,000 assumed to be expended in the development of the system, whether the amount be more or less, shall be expended under the direction and approval of the City of San Diego.

We would expect to issue these bonds with a retiring clause, so that the city would exercise its right to purchase under contract at any time. You will see that under this plan, the city will have only to pay \$1,500,000 now for bonds and will need to expend no more money if it sees fit for twenty years thereafter.

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Further, the above payment of \$1,500,000 will enable us to furnish the money for the construction so that the city will immediately have all of its water available for the purposes of development of the city and the neighboring country. All this will be done without the expenditure of any more money and without any extra burden thrown upon the municipality.

This is a general outline of the method by which the city can obtain this water with a minimum expenditure and burden, and any modifications and changes in the matter of detail can easily be adjusted.

If the city should enter into the above contract without delay, it would permit a sufficient time for the construction of the Carroll damsite before the coming winter; this would insure to the city ample water for 1915. During 1915 the Warners construction could be completed so that the city would have the San Luis Rey water by the spring of 1916.

You can readily see the necessity for immediate action to prevent the loss of a year in obtaining the water.

Yours very truly,

(ED FLETCHER)

Manager.

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REPORT ON COST OF CONSTRUCTION OF A PORTION
OF VOLCAN LAND AND WATER COMPANY'S SYSTEM

By William L. Post and C. E. Hickok

May 11, 1914.

INTRODUCTION

This report is prepared by instructions of Mr. Ed. Fletcher, Manager, to furnish an estimate of cost of the construction of Warner's Dam to 80 feet water level, Warner Canal from the dam to and through the divide into Santa Ysabel River, Carroll Reservoir to 90 feet contour, a pumping plant at the Carroll Reservoir, and a pipe-line to the city of San Diego.

WARNER'S DAM

This estimate provides for a reservoir to the 80 foot contour with a capacity of 78,310 acre feet. The area flooded will be 2960 acres. The dam is calculated for a height of 55 feet or 5 feet above the high water line. The type of construction proposed, is hydraulic fill 20 feet wide on top with slopes of 2½ feet horizontal to 1 foot vertical. The upper slope will be riprapped. An outlet tower and regulating gates are estimated to be connected with the tunnel already constructed.

WARNER CANAL

This canal will convey the water of Warner reservoir from the outlet tunnel through the divide between San Luis Rey River and the Santa Ysabel River, a distance of 6.6 miles. The type of conduit estimated is concrete lined canal 4 feet wide on the bottom and 3 feet 6 inches deep on a grade of 1 foot per 1000. The capacity is 6000 miner's inches. The estimate includes two short tunnels and the divide tunnel 6200 feet long. This will

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WARNER'S DAM

This estimate provides for a reservoir to the 80 foot contour with a capacity of 78,310 acre feet. The area flooded will be 2960 acres. The dam is calculated for a height of 35 feet or 5 feet above the high water line. The type of construction proposed, is hydraulic fill 20 feet wide on top with slopes of 2½ feet horizontal to 1 foot vertical. The upper slope will be riprapped. An outlet tower and regulating gates are estimated to be connected with the tunnel already constructed.

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deliver the Warner water into the natural channel of Temescal Creek, thence it will reach the Santa Ysabel River and finally flow into the Carroll Reservoir.

CARROLL RESERVOIR

This reservoir is proposed to have a depth of 90 feet when it will flood 980 acres and have a capacity of 24,500 acre feet. The dam estimated is cyclopean concrete with spillway over the entire length of the dam. On the lower side of the dam will be situated a pumping plant, probably consisting of 3 - 400 HP motor-driven units, one of which will be ordinarily used as a spare. The average lift of the water will be about 250 feet. If it is desired, the low service supply of the city of San Diego can be furnished by a pipe line laid to La Jolla, thereby eliminating much of the pumping lift.

PIPE LINE TO THE CITY OF SAN DIEGO

The pumping plant will deliver the water to an elevation of 512 feet from which point an economical gravity pipe line can be located in almost a direct line across the Linda Vista Mesa to the University Reservoir. The altitude of the top of this reservoir is 400 feet. The size of the pipe line necessary to deliver 10,000,000 gallons daily is 32 inches. This is estimated to be constructed of riveted steel with a life of 20 years.

The attached sheet gives the estimate of cost for the above described works.

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SUMMARY OF COSTYARNER'S DAM

Earth dam 85 feet high	\$ 187,000	
Outlet tower and tunnel	<u>30,000</u>	\$ 217,000

YARNER CANAL

Contract to Inward Tunnel	\$ 180,500	
Inward Tunnel	<u>158,200</u>	338,700

CARROLL DAM AND PIPE LINE

Concrete dam 90 feet high	\$ 275,000	
Penstock plant, etc.	45,000	
2 1/2 miles of 32" steel pipe from Carroll Dam site to University Heights Reservoir	<u>406,000</u>	<u>725,000</u>

TOTAL		\$1,281,500
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Engineering and contingencies 20%		<u>256,300</u>
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TOTAL COST		\$1,537,800
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Inward Tunnel	<u>158,200</u>	338,700

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Capacity of Reservoir

Proposed maximum depth of water is 90 feet for which capacity is ----- 117,000 acre ft.

Cost of Dam

95 ft. high for above capacity is \$324,600.

Date of Beginning Work

On March 12, 1911, a field party under direction of Post were engaged in locating the 6th to 12th mile of the Warner Conduit.

Work at Damsite proper began by arrival of a camp at Warner Dam (Filed letter WSP to M Duley May 21) as follows:

Arrived at camp May 13th.
Worked May 14th
Worked May 16th
Work discontinued May 17th or 18th.

The work consisted of erecting tents and building permanent wood kitchen and eating quarters, and building some 100 feet of diversion flume, preparatory to exploring bed rock.

Orders were received May 17th to discontinue promptly on account of a disagreement as to purchase of Warner's Ranch.

The payroll was as follows:

Warner Water Project.
(Right of Way Notes & Prospecting for Bed Rock)
Pay Roll, May 1st to May 20th.

W S Post	Engr.	12 days at \$10.00	\$120.00
J T Holbert	Assistant	6 1/2 days at \$ 3.50	22.75
D W Shellhamer	Carpenter	4 days at \$ 4.50	18.00
Fred Nihel	"	4 days at \$ 3.50	14.00
Gus Holmes	Cook	7/31 mo. at \$50.00	11.30
Wm. Dyke	Laborer	5 days at \$ 1.75	8.75
Wm Dyke horse	Camp horse	2 days at \$ 1.50	3.00
			<u>\$197.80</u>

Various material purchases were also made between May 5th and 20th including centrifugal pump \$210.00.

The delay on May 18th lasted only to about June 8th when a force of 6 to 20 men and 8 to 12 horses worked continuously on bedrock excavation and placing a cut-off wall. The total construction expenditures were as follows:

<u>1911</u>	
May	\$751.
June	2082.
July	1873.
August	2775.
September	5232.
October	3835.
November	602.
December	<u>186.</u>
	\$17,336.

For 1912, Harvey Davis as Assistant Engineer remained at the dam, conducted water measurements, and executed surveys of the reservoir.

Core drill operations were begun in November 1911 and continued until May or June 1912, expenditures about \$10,000.

The average expenditure for water measurement (Davis, Ass't Engr. or W J Isbell, hydrographer, being continuously on the ground) was \$90 per month.

Aside from surveys, water supply, core drilling, etc., no further construction was undertaken in 1912.

In 1913, Hydrographer continuously on the ground, expense about \$90 per month.

July 8th 1913 started excavation of portals of Warner Outlet Tunnel.

By October 9, 1913 work began on Tunnel proper and has been continuous to date.

Total Expenditure to April 1st, 1914 chargeable to Warner Dam is

Cut-off Wall Excavation	\$3878.
" " Concrete	3884.
" " Pumping during	
Excavation and concreting	4726.
Gate Tender's House	1710.
Plant - Mach. and tools	3876.
Camp erection & equipment	2181.
Core Boring	10000.
Outlet Tunnel - E Portal Excav.	1000.
" " - W " "	692.
Tunnel proper	4822.
Lining Tunnel	8592.
Total (without overhead)	\$ 45,361.

Number of Men now Employed - May 20, 1914

Concreting floor of outlet tunnel

1 Foreman	at \$4.20	\$ 4.20
1 Gas Engineer	at \$3.00	3.00
1 Cement Worker	at \$3.00	3.00
2 Laborers	at \$2.50	5.00
Total Labor		15.20

Also

1 team	at \$2.00	2.00
Material - mostly cement and gasoline		
per day		18.00
		\$ 35.20

5 (b) Warner Conduit

Previous to water filing surveys were made of Warner conduit by W S Post for Pacific Light & Power Co. in 1905 to 1906. Also in February 1911.

Water filing March 16, 1911. March 12th to April 29th field surveys were made especially on the lower end of the Warner conduit, the expenditure being \$733 for engineering payroll and at least \$60 in expenses. No further work was done directly on the conduit but on May 10th work was begun on the Warner Dam as already described.

In January 1912 Fletcher and Post took up the adjustment of Escondido which was later formed into a contract dated June 21, 1912 and shown in Exhibit 2.

From March 1912 until July 1913 it would appear that Mr. Hawgood was more or less engaged on preparation of right of way maps and securing their acceptance by the United States Interior Department. During this period Mr. W. L. Huber, District Engineer of the Forest Service, under date of April 19, 1912 reported to the Forester on the rights of way of Warner Canal and Pamo Canal. (See Exhibit 11).

Also during this period (March and April 1913) Mr. Hawgood placed a party in the field and resurveyed certain portions of the line securing additional topography. The record of this expenditure is in Mr. Henshaw's office in San Francisco and will be furnished later. No further construction work was done.

65

5 (a) Black Canyon Feeder

The purpose of this feeder is to divert the water of the Black Canyon, a tributary of the Santa Ysabel, having a watershed of 17 square miles into the high water line of the Sutherland Reservoir. A water filing was posted on May 7, 1913. On July 22, 1913 survey was commenced for this feeder and completed within two weeks. An application was made for a temporary permit or "Special Use Permit" to the Forest Service. On September 24, 1913 this "Special Use Permit" was issued covering that portion of the survey about 2 miles in length upon Forest Reserve lands.

It should be noted that the upper half mile of this ditch is upon an Indian Reservation and the intake. Permit has not issued for this portion of the conduit. The water notice also is ~~pumping~~ ^{planned} on Indian Reservation. No further work has been done on the Black Canyon Feeder since the granting of the temporary permit.

Stipulation 7 of the Permit states that construction work shall begin with one year and be completed within 2 years and Stipulation 8 states that the permit is not transferable (Section 3737 U S Revised Statutes) and shall terminate upon breach of any of the conditions or at discretion of the Forestry.

The gaging station has been established since February 1913 on Black Canyon and the proportional charge for hydrographic work is \$15.00 per month continuous up to date.

The Company has presumed that the Black Canyon Feeder could be consisted as a part of the Sutherland Dam and Ramona

the entire time of the preparation of this application one laborer was employed at an expense of \$2.00 a day in brushing or trail cutting along the line. In addition to this expense was the hydrographic expense of about \$30 per month continuous at the dam already described. during this period. Upon the filing of the application with of the laborer the Interior Department, work was discontinued because the application is within a Forest Reserve and therefore protected by the provisions of a State Law which does not require work while the application is pending.

This application was filed about June 1st, 1913, and granted about July 1st, 1914, as an irrigation right of way, stipulating that if power use was desired, an additional application would be made. Since July 1st, 1914 no construction work has been done directly on this conduit aside from the hydrographic work already mentioned, a small amount of grading about April 15th to 17th, 1915 on the conduit itself, and the construction road already mentioned under Sutherland Dam now in progress.

Read work was then started for a road connection with the main county highway necessary for the hauling in of the materials for the Dam. This outfit consisted of 8 men and 6 mules and they have been working continuously to date.

The number of men employed on May 20, 1915 is as follows:

1 Foreman	at \$3.50	\$3.50
1 powder man	at \$2.75	2.75
3 teamsters	at \$2.50	7.50
3 laborers	at \$2.25	<u>6.75</u>
Total labor		\$20.50
Also 6 mules	at \$1.50	9.00
And material		<u>4.00</u>
Total daily expenditure		\$33.50

5 (d) Ramona Conduit

This conduit begins at the Sutherland Dam and will carry the water from this dam a distance of 4 miles into the drainage basin of the Santa Maria Creek. Thence it may follow the natural channel of the Santa Maria Creek to the Santa Maria Reservoir and thence by feeder back to the Pamo Canal. It is also possible from the end of the Ramona conduit to deliver the water by very direct route either to the San Diego Flume or by pipe line to the City of San Diego or by a pipe line to the San Clemente Reservoir.

On _____ to _____ a survey for right of way was executed by W S Post. An application was prepared to the U S Interior Department asking for a right of way for the main purpose of irrigation. During

On April 1, 1913 a camp was established near the 5th mile of the Warner conduit and work started upon a construction road 1 mile in length to connect the county highway with the portal of the long tunnel. This was prosecuted until July 8th when the workmen were transferred to Warner Dam tunnel. The total expenditure for constructing roads in connection with the Warner Conduit to date has been \$2,268.00 without overhead.

On November 17, 1913 work was begun on the excavation of the first mile of the Warner conduit. This was completed on March 5, 1914. The total expenditure was \$2,960.00. Since that time no work has been done directly on the Warner conduit.

5 (c) Sutherland Dam

About 160 acres and the damsite at Sutherland were purchased in the Fall of 1912 and the water filing made December 14, 1912. Previous to this time Dessery & West for Mr. Hawgood had made a survey of the reservoir site.

By February 12, 1913, ^{survey and} clearing was commenced upon the Ramona conduit which is the conduit leading from Sutherland Dam. A hydrographer was employed who visited Sutherland every week, an automatic register installed, the average and continuing expense chargeable to Sutherland Dam water measurements being about \$30.00 a month. No other construction work was done upon the Dam until April 13, 1915.

5 (g) Pamo Conduit

Certain surveys were made on Pamo Conduit in February and March 1911 before. Filing was made at Pamo Dam as before stated on June 13, 1911.

In July 1911 J. H. Lippincott was employed to prepare the application to the Interior Department for rights of way of the Warner and Pamo Canals; the surveys for this purpose being practically complete from the former surveys purchased by Mr. Henshaw and additional field work of February, March and April 1911.

Office work and expense on this application continued through July, August, September and October, 1911. On September 11th - 14th a field survey was made in connection with further data for the application.

On November 13, 1911 a field party was organized to locate the Pamo Conduit, take cross-sections and prepare estimates of yardage and plans for structures. This continued until February 1, 1912; the total expenditure being at least \$4,000.

Work on the repair of the construction road parallel to the first five miles of the conduit was carried on the Fall of 1911 and Spring of 1912, by the foreman at the Pamo Dam, when not engaged on test pits, etc., at the dam.

After the filing of the application for right of way little or no work was done on the Pamo Conduit proper.

On April 24th - May 10, 1915, work was done in repair of above mentioned construction road, and placing additional culverts.

operations were carried on for the remainder of the year.

In 1913 the construction road originally built by the Linda Vista Irrigation District was repaired and extended and maintained in 1914 and 1915. The date in 1915 being between April 17th and May 1st.

During this entire period a resident hydrographer was maintained at Pamo Dam camp and the proportionate share of hydrographic expense for this station continuous from February 1911 to date is \$30.00 per month. The present expenditure on Pamo Dam consists of

1 care taker	\$2.50
1 laborer on roads	<u>2.25</u>
Total daily expense	\$4.75

conduit and no special effort has been made to perform work directly on this feeder.

5 (f) Pamo Dam

The water filing at the Pamo Dam was posted June 13, 1911. Somewhat before this negotiation looking into the settlement of the Linda Vista bonds had begun. The land on which the notice was filed was land owned by the Linda Vista District. About September or October a camp was placed at the dam with a foreman and two men who made exproation pits at the Damsite. This foreman and never less than one man have remained constantly at work on this Damsite until date.

By March 1912 in addition an engineering party was engaged in the survey of the Damsite in the location of the Pamo conduits which leads out of the reservoir. These surveys were completed about May 1, 1912. Soon after this date the application for rights of way including 40 acres in this reservoir site was filed and as previously explained was not granted until about July 1913. In the months of May and June 1913 the foreman employed some six men in exproation for bed rock in the stream channel at two different sites by means of shafts.

On November 17, 1913 a core drill was installed with a gang of six men which made complete exproations of the damsite. This work continued to May 1914 when the core drill and gang were moved to the Carroll reservoir site where similar continuous

(g)	<u>Pamo Conduit</u> Surveys about Construction roads about	\$ 4,000 <u>2,000</u>	\$ 6,000
(h)	<u>Santa Maria Reservoir</u> Surveys		200
(i)	<u>Santa Maria Feeder</u> Surveys		100
(j)	<u>Carroll Dam</u> Surveys and construction Legal	\$ 3,202 <u>508</u>	3,710
(k)	<u>Carroll-University Canal</u> Surveys		800
(l)	<u>San Clemente Reservoir</u> Surveys		200

5 (k) Carroll - University Pipe Line

In connection with the Carroll Dam, this pipe line would supply by pumping the Linda Vista Mesa and the City of San Diego.

A survey was made in August and September 1914 locating the Line, but no further work has been done.

5 (l) San Clemente Reservoir Site

All lands in the Reservoir site is purchased. The water right matter is negligible, as the site lies in an unimportant local drainage of only a few square miles. It will serve as a receiving and distributing reservoir.

A topographic survey was made in 1912 and land corners established in 1915, but no other work has been done here.

5. Engineering and construction expenditures on above units are as follows to Date of April 1, 1915:

(a)	<u>Warner Dam</u> as stated		\$45,361
(b)	<u>Warner Conduit</u>	\$ 4,867	
	Surveys about	4,000	
	Roads " "	<u>1,000</u>	9,867
(c)	<u>Sutherland Dam</u>		
	Up to April 1, 1915, say	\$ 200	
	April and May " "	<u>1,500</u>	1,700
(d)	<u>Ramona Conduit</u>		
	Surveys	\$ 700	
	Labor - about	<u>300</u>	1,000
(e)	<u>Black Canyon Feeder</u>		
	Surveys, about		200
(f)	<u>Pamo Dam</u>		
	Test pits Site "B"	\$ 2,066	
	Core Drill " "B"	2,326	
	Test Pits " "D"	<u>189</u>	4,581

5 (h) Santa Maria Reservoir

No water filing has ever been placed on the Santa Maria Creek by the Volcan Company. 120 Acres including the dam site are in the ownership of the Company. Surveys were prosecuted in February and March 1912 to tie in the original surveys (Linda Vista Irrigation District). In November 1912 hydrographic records were begun, the amount chargeable to this station being \$15.00 per month.

In 1913 an automatic gage and shelter were placed at an expense of about \$100.

No work aside from hydrographic records is being done on the site.

The site is all on private land and was not included in United States Right of way applications.

5 (i) Santa Maria Feeder

This feeder is about 1 mile long and is planned to put the waters of Santa Maria Creek into the Pamo Conduit. It was surveyed in March 1912, and became part of the U. S. Right of Way application, which as before stated was filed about May 1912 and granted January 16, 1913.

No work has been done on this feeder.

5 (j) Carroll Dam

This dam is the third and lowest of dams proposed on the Santa Ysabel River.

The filing was made February 21st 1914, on unsurveyed public land.

All private lands in the reservoir site were under option at the time of purchase, and are now held by the Company, with the exception of the Bernardo Rancho in the upper portion of the basin which is in litigation. Forty acres of surveyed public land in the site were purchased by scrip and the damsite 40 acres were purchased through unsurveyed land scrip, costing \$2,000, although the patent can not issue until U S Survey is made.

A few acres of public land remain and an application for easement under laws of 1891 was made to Interior Department, together with right of way for Carroll - University pipe line.

The survey for this application was begun April 11, 1914 and completed May 12, 1914. Further survey was made later on the canal line leading from the dam.

On November 9, 1914 application for easement was filed and is still pending (June 1915).

Late in May 1914, core drilling apparatus was placed on the site and drilling for bed rock continued until September 15, 1914 after which a caretaker, who did brushing, etc., was employed during September, October, November and December 1914. On January 1, 1915 a foreman and 2 men were put on which has continued to date.

The daily expenditure on May 20, 1915 at Carroll Dam was

1 Foreman	\$4.00
1 laborer	2.50
1 "	1.75
Material	<u>2.50</u>
Total	\$10.75

6 (a) Warner Dam

The following are the estimates of safe yield in
Acre Feet:

	<u>Safe Yield</u>	<u>Turned out for Escondido contract</u>	<u>Remaining safe yield to be diverted</u>	<u>M. I.</u>	<u>Maximum capacity required Ac. Ft.</u>
Harroun, 1914	17,600	742	16,854	1,160	106,300
Post 1914	21,720	802	20,918	1,430	117,000
Lippincott (#) 1915	15,400?	900?	14,500?	1,000?	120,000?

= Unofficial, subject to correction when report is received.

It will be practically correct to say the available continuous safe yield at Warners Dam, will be at least 1065 M. I.;

Prior Rights

Escondido Ditch The terms of the agreement are calculated to require the turning out of 900 acre feet or 65 M. I.

Rincon Indians U. S. will probably claim that no change in the regimen of the River shall be made which will affect the summer flow. It will be understood that historically the Escondido people ceased to divert by June 1 of each year to avoid any complication. An additional reason was that any diversion of theirs less 200 M. I. was all lost in ~~spage~~ and failed to go through to outlet of their ditch.

My theory is then that during the summer months, the Volcan Company will have ^{to} turned out the historic summer flow past Warners

Dam, from June 1 to say October 1, when irrigation ceases and streams begin to "rise" due to decrease in evaporation.

This summer flow at Warner Dam has been, June 1 - Oct. 1:

	<u>Acre Feet</u>
1911	405
1912	511
1913	323
1914	360
Average	400 Acre Ft.
"	28 continuous M. I.

Such an agreement has not been entered into with the Indian Service, but I believe it is entirely feasible to obtain a contract, and that this would be the extent of demands.

Therefore of the total available at Warners 1065 M. I.

Deduction is required for	Escondido	65	
	Rincon	<u>28</u>	<u>93</u>
			972 M. I.

Aside from the Rincon Reservation riparian agreements are complete for the first 20 miles of the River, and no other water need be turned out. This brings us to the Pala Indian Reservation Ditch.

Pala Indian Ditch

The drainage area of the San Luis Rey for Warners

Dam is -----	210 square miles
Escondido Intake is -----	243 " "
Pala Indian Ditch is -----	218 " "

Between the Rincon Reservation and the Pala Indian Ditch is some 8 miles of broad sandy river bed. This has no surface flow after June 1st but acts as a great storage basin for flood waters.

The lands occupied by the Pala Indians were not originally U. S. lands, but were purchased from private owners, including an old ditch in 1904, and therefore here at least the United States has the simple status of a riparian owner who has made use of water.

The showing above made also applies to any further use of water below Pala. All riparian rights except 4 owners have been secured.

The ditches on the River are as follows:

<u>Name</u>	<u>Owner</u>	<u>Max. Diver- sion M.I.</u>	<u>Total Annual Diversion Acre Ft.</u>
Escondido Ditch	Escondido Mutual Water Co.	2,000	4,000
Rincon Ditch	U. S. Indian	100	200
Pala Ditch	"	300	1,000
Morena Ditch	Mrs Morena	50	100
Libby Ditch	Volcan Co. in part and per- haps some shares not pur- chased	80	600
San Luis Rey Irr. Co. Ditch	Volcan in part, other shares outstanding	125	500
Goldbaum or Mission Ditch	Abandoned	50	

Ditches 1, 2 and 3 have been already discussed. Ditch 4 is immediately below Pala Ditch and governed by the hydraulic conditions already stated.

Ditches 5 and 6 are flood water ditches ceasing diversion usually by June 1st, on account of drying up of river bed. They both have temporary brush mattress headings replaced annually after floods cease, and both require pumping plants on the properties sewed to finish the season.

The mean flow in Miners Inches available for Pala Ditch,
June 1 - October 1, during 11 years:

	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
1904	540	190	100	100	
1905	1150	205	150	130	
1906	3295	950	509	185	
1907	1140	164	71	111	
1908	370	150	170	100	
1909	312	268	257	250	
1910	273	-	-	-	
1911	230	-	-	-	
1912	311	178	156	169	
1913	215	156	169	118	
1914	225	134	54	69	
Average M.I. OR Average Ac. Ft	733 882	266 330	182 225	136 163	1600

As shown before at Warner Dam there was normally flowing during this period only 400 acre feet (an amount which it is still proposed to allow to pass) and yet 1600 acre ft. were yielded at Pala. This result that at least 3 times as much flows out of the gravels than flows in is considered to be due to the "detaining" action of these gravel beds. It is capable of proof that the water flowing into the upper end of the gravels in June at the Rincon can not advance to Pala by October, on account of the low rate of filtration through gravels.

It is along this kind of showing that Mr. Olberg, Supt. of Irrigation Service, Indian Bureau, is satisfied that there will be no effect on the Pala Ditch by the Warners Diversion.

which later filter out at the intake of the Pala Ditch. The consensus of opinion is that the annual recharge of these gravel beds is amply provided for by

(a) Drainage area below Warner Dam and above Escondido Intake, 33 sq. miles yielding floods in excess of the capacity of the Escondido ditch to divert.

(b) Drainage area - below the Escondido Intake, 75 sq. miles

In all providing an average annual runoff of ---- 38,500 ac.ft.

Deduct stoppage by Warners ----- 20,000

18,500

Deduct diversion from 33 sq. miles immediately Escondido Intake, - by Intake over and above turned out at Warners ----- 3,100

Leaving for saturation of gravels ----- 15,400 Ac.ft.

Historically the summer flow at head of Pala Indian ditch has been as follows (See U S Geological Survey Water Supply Paper #300) as measured at the U S Station immediately above the ditch Intake.

Note: Last line of my page 74 should read:
 "Company will have to turn out, etc."

Ditch 7 has been abandoned since 1911 or 12.

The argument of detaining action of gravels and sands applies even more fully to Ditches 5 and 6.

Pumping Plants

Probably 30 pumping plants exist on the River. The larger ones are:

<u>Name</u>	<u>Owner</u>	
Rincon	U S Indian Bureau	- riparian lands
Pala	"	"
Monserate	Johnson	- riparian release obtained
Bird Ranch	Canfield Est.	" " "
South Coast Land Co.	- This is a ^{new} riparian Diversion of 200 M.I. to Carlsbad with consent of City of Oceanside.	
City of Oceanside	- 20 M.I. maximum City Supply. Injunction suit pending against Volcan Co.	

Lee's Report

This report has to do with the Oceanside suit, and a copy is being made for your use. His conclusion is that

After construction of Warners and diversion, the average residual flow at Pala will be (810 M.I.) ----- 11,738 Ac.Ft

The maximum amount required to surcharge the gravels of the river and secure permanency of present regimen is ----- 7,890 "

Average waste into Ocean under new conditions (266 M I) 3,848 "

Lee is still studying dry years and has expressed no opinion.

6 (b) Santa Ysabel River

Relative to storage and use from Sutherland, Pamo
and Carroll Dams.

The following are the estimates of safe yield - in Ac.Ft.

Sutherland

	<u>Safe yield all diverted</u>	<u>M. I.</u>	<u>Max. storage required</u>
Harroun - 1914	6,650	455	16,400
Post - 1914	10,110		

Pamo (Sutherland built)

	<u>Safe Yield</u>	<u>Turned out for priorities</u>	<u>Remaining safe yield to be diverted</u>	<u>M.I.</u>	<u>Maximum storage required</u>
Harroun	6,250	3,850	2,400	165	47,500
Post	10,110				

Carroll (Sutherland and Pamo built)

	<u>Safe Yield</u>	<u>Turned out for priorities</u>	<u>Remaining safe yield to be diverted</u>	<u>M.I.</u>	<u>Maximum storage required</u>
Harroun	4,200	1,330	2,870	196	
Post	No estimate				

Lippincott report not yet available.

No 9 -

Valuation Data - General Sheet -

Showing monthly sugar expenses -

5 (g to l)

The work story of the Pamo Conduit, Santa Maria Reservoir, Santa Maria Feeder, Carroll Dam, Carroll-University pipe line, and San Clemente Dam are in preparation and will be forwarded as fast as prepared.

6. and 7. relating to the hydrographic information and the claims upon the River will be forwarded later.

Point 8 with reference to the Sawday Tunnel case will be forwarded shortly.

Point 9 Overhead Expenses - will be made out in conjunction with the three offices and furnished later. In a preliminary way the monthly expense for engineering is furnished under No. 9.

10. Copies of option and information relative to the City of San Diego are enclosed herewith.

Under No. 11 I furnish some miscellaneous documents.

PRIORITIES

The Santa Ysabel occupies a steep mountain canyon as far as the San Pasqual Valley. There are no complications in the use of water up to this point.

The broad San Pasqual Valley and Bernardo Valley contains about 4,000 acres of arable riparian land. About 2500 acres are now actually under cultivation. The probable present use of water is about 5,000 acre feet, ditches, pumping plants and all and the ultimate riparian development may require 8,000 acre feet. Now the drainage area of the San Pasqual Valley is 300 sq. miles. The proposed Reservoirs of Sutherland and Pamo will exclude 110 square miles leaving 190 sq. miles of drainage area furnishing some natural stream flow (in the Guijito and Santa Maria Creeks) and very considerable floods to recoup the gravels. The amount supplied by this local area of 190 square miles has been determined theoretically only. Post (1914) makes it 3500 acre feet on the average leaving the present requirement to be turned out 1500 acre feet, and the ultimate requirement 4500 acre feet. Harroum's corresponding figure is 3850 acre feet.

The established ditch rights are:

	<u>Max. M.I. capacity</u>	<u>Average use in Acre feet</u>
East San Pasqual Ditch	800	1180
West San Pasqual Ditch	450	1286
Harris or Latta Ditch	50	100

No 10-

Offer of Sale re-
to City of San Diego

No 11-

Misc. Data
Hubers Foundry Report.

No 11 -

Schedule of Salaries
(not sent)

Present Expenditures

Volcan Land and Water Company

May 20, 1915.

Warner Dam

Concreting Outlet Tunnel

2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	<u>18.00</u>	\$ 35.70

Cook House

Cook		<u>2.25</u>
------	--	-------------

Total daily at Warner's \$ 37.95

Pemo Dam

1 man at	\$ 2.50	
1 man at	<u>2.25</u>	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.03	
Material	<u>2.50</u>	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
6 Head Mules at 1.50 (including feed)	9.00	
material	<u>4.00</u>	\$ 33.50

Resume

Warner Dam	\$ 37.95
Pamo Dam	4.75
Carroll Dam	10.78
Sutherland Dam	<u>33.50</u>
	\$ 86.98

Expenditures Volcan Land & Water Co.
through office of W. S. Post.
March 1915

Water Measurements	\$ 257.91
Warner Dam	539.77
Pamo Dam	75.00
Carroll Dam	197.34
Engineering	346.11
Office	129.33
Compensation Insurance	<u>144.01</u>
	\$ 1,689.47

Escondido Mutual Water Co.

Water Filings.

Examination of the records of San Diego County show that
on the 14th of February in 1890, Escondido Irrigation District filed on various
tributaries of the Bear Valley as follows:

Canyon Flowing into the Guejito Creek	---	5000	Miner's Inches.
Courtney Canyon flowing into Bear Valley	---	1000	" "
Streplin Valley	---	"	" "
Reedy and other Canyons	---	2000	" "

The San Luis Rey filing (Book 2 Page 101 of Water Claims)
is dated February 14, 1891 for 20,000 Miner's Inches,- Point of
diversion " near where San Luis Rey crosses SE 1/4 of Sec 5 T11 S R2
E " to be conveyed in ditches and Flumes 5ft. on bottom 7 ft. on
top and 4 ft. deep to Bear Valley- made by Escondido Irrigation
District by it's offices.

On April 7, 1893 filing is repeated stating the sectional
area of ditch respectively as 136 sq.ft. and 132sq.ft.

Other Water Rights.

A large number of water filings on the San Luis Rey
river are recorded in the recorder's office in San Diego County.
They are mostly unimportant as they were not followed within 60
days by diversion and use. Of the four books of recorded water
claims, containing some three hundred notices of Appropriation on
the San Luis Rey or tributary streams I note the following:

Record	Date	Stream	By whom	Purpose	Point of Diversion
1-14	Dec. 19, '83	Agua Tibia	Lee H. Utt & E. Case		Near Ro. House use of on Sec. 29, 30 & 31 T. 2 S R1 W.
1-14	ditto	100"	"		At N. E. 1/4 Sec 29.
1-90	Sept. 17, 1889	500"	Thomas Alvarado		crossing e. line Montserate Ro.
1-366	Mar. 24. 1888	50"	P.S. Sparkman		On lot Sec 23 T10 S. R1 W.
1-453	Sept 24, 1889	5"	Mary E. Salmon		In sec. 24, T10 S R1 W.

A considerable number of filings some five years ago
in connection with Power are not detailed here.

The existing Indian ditch at Pala does not seem to have
a filing. The present use is about 100 acres and diversion of
50 to 100 inches.

Rampart Apartments,

Los Angeles, Cal. Feb. 14, 1919.

Mr. Wm. G. Henshaw,

Kille Building,

San Francisco, Cal.

Dear Sir:-

Mr Fletcher tells me that you have sent me a letter on San Luis Rey riparian matters, which however has not reached me. In the meantime I forward my position regarding this and will supplement it with such further data as your letter may require.

Riparian Rights on The San Luis Rey.

The theory of riparian rights as supported by court decisions supposes a vested right in waters flowing through the lands and in percolating waters under the land, to the extent of economical use of such waters on said lands. This right exists in law whether in use or not, but is subject to the law of appropriation and priority among riparian owners.

The tenancy of the court decisions are that a riparian owner cannot interfere with surplus waters such as are intended to be ponded in Warner's Dam.

The next question and the only one which in my opinion can make you difficulty, is with regard to ordinary flow. Let us assume that the total of riparian lands whether using water or not could

Page 2.

as a matter of fact use all the ordinary flow. My understanding is that a riparian owner could then attack in the courts the diversion at Warner's Dam-of the ordinary flow above the Dam-, that the courts would decide that the riparian owner is entitled to enjoin any change in the regimen of ^{the} river which prevent him from enjoying his vested right to use of waters on the land, at any time he may elect to ^{do so.} ~~use it.~~ ^{In this he} might have his troubles with other riparian owners who had established priority of use, but not with a diversion out of the watershed, such as Warner's.

The physical facts regarding a stream are important. It can be proved of the San Luis Rey that the first ten miles below Warner's ~~isxaxxaxax~~ to the Rincon is a canyon without possibility of riparian use, and flowing in variation with rains and ^{decreasing in summer} ~~decreasing~~ to a minimum of flow of 75 Miner's Inches at the Rincon. Here it enters a broad gravel area (Pauma Rancho) 300 or 400 feet deep, fed as into a sponge by the encircling watershed of Palomar Mt. and the upper San Luis Rey. This is the significant general fact. From here on water flows in as into a sponge until saturation of gravels is complete from Pauma to the sea, and any flow beyond saturation appears as stream flow. It is true that outside of storm floods (which are surplus waters) that this mass of saturated gravels are and will remain the real distributing ~~ex~~ point of useful irrigation waters in the lower valley, that is as far as summer use is concerned these gravels hold back and deliver water after the rains are over, and that once saturated in winter, all other water is lost ~~by~~ for useful use by surface flow to the sea.

My opinion is that the Palomar and other mountain drainage above Pauma Rancho is sufficient to maintain this

saturation in the winter without the flood waters or ordinary flow above Warner's Dam. I believe this theory will work out in practice and be accepted in the courts if it came to that as applied to riparian right pumping plants. There remain the various ditch rights as at Pala and particularly in the lower valley around the Mission. These are based on surface flow and it is simply a question of fact as to what rights they have, what quantity they divert, and during what period. They are in a position to demand these ^{rights} quantities. The simplest solution will be to make agreement to supply such water by pumping in case operations at Warner's Dam do as a matter of fact decrease stream flow.

If such agreements can be made to cover every ditch right in every ditch, it is the solution to be advised. otherwise it is a question whether the courts would compel a ditch right owner to take pumped water in lieu of water which he formerly diverted as surface water.

To avoid any contradiction here in my opinion that the saturated gravels really establish the regimen of the river and answer the question why then will surface flow conditions be changed, I add this additional fact regarding the river, - originally suggested by Mr. Olberg of the Indian Service. The waters in these inclined gravels have a slow rate of flow toward the sea, as though a filter, and this establishes a ground water grade line illustrated in the sketch. The actual surface grade due to geology is different. Where the ground water grade is below the surface grade the stream is dry, when it is above, the stream is flowing. ^{The} Example would be the

Monterate Narrows. That is according to this theory where the stream is flowing above ground is merely a special case of ground water plane exposed by removing gravel which in other places covers it.

Now if ditch rights could be confined as by agreement or in future court decisions to this view of the stream flow. My contention is that the building of Warner's Dam will not interfere with this class of flow because it is based on the saturated gravels. But on the other hand, it is very possible that these old ditches have actually been picking up also flood rushes in the late spring, spread out and lengthened into several days flow over the saturated gravels. They then have rights established apparently to surplus flow.

This is in my opinion the only difficulty, and should be avoided by agreements and definition of ditch rights, which will remove any necessity of turning down surplus water.

I recommend-

- a) Continuing to acquire riparian rights by purchase of the rights or lands with rights,
- b) To arrive at an agreement with all ditch users as to the amount which they lawfully are entitled to, and an understanding, ^{both} as to time, - quantity and rate at which they have received water, and a guarantee that any substantial difference will be made good by pumping.
- c) That steps be taken to obtain all hydrographic and legal difference evidence along the river, preferably in co-operation with or through an impartial authority like the U.S. Geological Survey or the State Board of Water Control. This is particularly desirable during this season, which will

Page 5.

be a dry year and the evidence will be conclusive as to the influence of Warner's diversion, as long as this year's observations are not lowered in the future.

These data would consist of-

1. Ground water and water plane gages, every few miles from the Rincon to the sea, observed say once a week.
2. Measurement of all waters entering the gravels around Pauma.
3. The proof of priority, use and extent of all active ditch diversions, and the acreage irrigated.
4. Proof of abandonment of any ditches at date of your filing at Warner's.
5. Statistics of the entire irrigated riparian acreage of San Luis Rey Valley, the quantity of water pumped and amount used per acre, and period of use.
6. Statistics of all irrigable riparian lands not in use.

You are then in a position to say to the 10% or less riparian owners with whom you have not settled that their rights correlated to the of other riparian ~~users~~ users are thus and so, and that you cannot guarantee to them more than they would obtain by court decision between riparian owners.

Very sincerely yours,

749 Garland Ave.

Los Angeles, Cal.,

May 14, 1912.

Mr. Wm. G. Henshaw,

640 Title Ins. Bldg.

Los Angeles, Cal.

Dear Sir:

Mr. Granville of the U.S. Indian Irrigation Service states that the application papers have not come to his hands as yet, but that he will be glad to act promptly when they arrive.

He suggests a letter to the Secretary of the Department of the Interior, asking for the status of the application relative to the Indian Bureau, and noting that the inspection by the Forestry Bureau is completed, and representing that the work is of importance and is being delayed by the inability to proceed and occupy ground etc.

He stated informally that the stipulations he would ask for are:

100 Miners inches measured at the point where they will draw from the Escondido Flume, to operate their power plant.

A right of way in Section 36 and in section 31 north of it, for a site for pumping plant and pipe lines. This section 36 is the original property of the Pacific Light & Power Co., and I am sure that this right of way granted will ~~facilitate~~ facilitate proceedings immensely.

Very sincerely yours,

June 5, 1915.

Mr. John M. Eshelman,
1115 Glendora Ave.,
Oakland, Calif.

Dear Sir:-

On the Volcan matter Mr. Fletcher wishes an answer to the following:

Question 1. At the rate that we are now building, how long would it take to complete the Warners and Carroll Dams?

Question 2. What is your opinion as to what should be done at Pamo and Sutherland?

Answer 1. Warner Dam.

The estimated cost of a dam 95 ft. high is ^{324,600} ~~\$350,000~~. The amount expended thus far is \$45,000 in 4 years an average of \$11,000 per year. At the present rate the dam would be completed in 30 years.

Carroll Dam

The estimated cost of this dam, 90 ft. high is \$265,000. The first year's expenditure has been about \$4,000 or at the present rate will require 66 years to complete.

Answer 2. Sutherland and Pamo Reservoirs.

I should strongly advise concentrating all work on the Santa Ysabel River at Carroll Reservoir. I should prepare to divert at Carroll Reservoir onto the lands of the Coast front between Del Mar and Carlsbad, and accompany it with a continuous dam construction. This would settle (a) ownership of water rights and establish use.

(b) Enable a "transfer of Intake" from Carroll back to Pamo or Sutherland if purchasers prefer it.

(c) Settle the riparian rights of all above Carroll Dam including the San Pasqual Valley applicable probably to such a transfer to Pamo or Sutherland.

Mr. John M. Eshelman, #2.

If this is not considered wise, I should advise

At Sutherland The prompt construction of the Ramona Conduit, some 5 miles in length and divert the water into the Ramona Valley. This would mean four possible uses of the water, some of them paying.

(a) A small power drop into Ramona Valley, about 400 H. P. and irrigation in Ramona Valley in which case exchange for Santa Maria or Ramona Reservoir lands could be stipulated.

(b) Use power drop and turn water down to Pamo Canal via Santa Maria natural channel, when it would be 16 miles from Linda Vista. This would be subject to danger of appropriation in Ramona Valley.

(c) Ready to carry directly to City of San Diego.

(d) Ready to use for power drop into Pamo Reservoir, 1100 horse power.

(e) Ready to connect with long $4\frac{1}{2}$ mile tunnel from Warner Dam.

Pamo Reservoir The O'Shaughnessy - Lippincott report specifically advises the Pamo Dam and the Pamo Conduit. Therefore it would seem advisable to retain active possession of the rights at this point.

I believe the best solution is to initiate the diversion of 3500 Miners Inches from the Santa Ysabel and proceed rapidly with the construction of the Pamo Conduit. This method I think has some merit from the legal standpoint because of the actual diversion of the water and the certainty of putting it to a useful purpose at the end of the conduit. It will be remembered that there is some summer flow in the Santa Ysabel amounting to at least 100 Inches. From time to time I have already advised this method of protecting the water rights at the Pamo Dam and feel very strongly that if the Pamo Conduit is decided on finally, that the sooner work commences on it the better, instead of spending an equal amount of money in storage in the Pamo Dam with no place to put it.

On the other hand construction of Pamo Dam itself may be decided on because this Dam will have to be constructed of earth and means a very large plant and rapid construction during the entire dry season in order to avoid the loss of all work through heavy floods.

The first step would be the construction of a scour-

Mr. John M. Eshelman, #3.

ing tunnel to by-pass the floods or a large capacity concrete conduit in lieu of the tunnel. Either of these could be commenced at once and carried forward with reasonably small gangs. These preliminaries should be timed to a commencement of dam building on March 1, 1916 when a fund of at least \$300,000 would have to be available.

I shall be glad to expand any of these points if I have not made them clear.

Very sincerely yours,

WSP-BK

*Copies of Water Filings
Same as Exhibit "C" in
Offer of Sale to City of San Diego*

No 2 (a)

Pgs 29-37

Agreement Esccondido M. W. Co.
+ Wm L. Henshaw June 21, 1912

Present Expenditures
Volcan Land and Water Company
May 20, 1915.

Warner Dam

Concreting Outlet Tunnel

2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	<u>10.00</u>	\$ 35.70

Cook House

Cook		<u>2.25</u>
------	--	-------------

Total daily at Warner's		\$ 37.95
-------------------------	--	----------

Pamo Dam

1 man at	\$ 2.50	
1 man at	<u>2.25</u>	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.03	
Material	<u>2.50</u>	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
6 Head Mules at 1.50 (including feed)	9.00	
material	<u>4.00</u>	\$ 33.50

Resume

Warner Dam	\$ 37.95
Pamo Dam	4.75
Carroll Dam	10.78
Sutherland Dam	<u>33.50</u>
	\$ 86.98

Expenditures Volcan Land & Water Co.
through office of W. S. Post,
March 1915

Water Measurements	\$ 257.91
Warner Dam	539.77
Pamo Dam	75.00
Carroll Dam	197.34
Engineering	346.11
Office	129.33
Compensation Insurance	<u>144.01</u>
	\$ 1,689.47

Present Expenditures
Volcan Land and Water Company
May 20, 1915.

Warner Dam

Concreting Outlet Tunnel

2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	<u>16.00</u>	\$ 35.70

Cook House

Cook		<u>2.25</u>
------	--	-------------

Total daily at Warner's		\$ 37.95
-------------------------	--	----------

Pamo Dam

1 man at	\$ 2.50	
1 man at	<u>2.25</u>	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.08	
Material	<u>2.50</u>	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
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Compensation Insurance	<u>144.01</u>
	\$ 1,689.47

No 8

June 9th, 1915.

Mr. John M. Eshelman,
1115 Glendora Ave.
Oakland, Cal.

Dear Sir:

On the Volcan matter, in answer to your question No. 8, -- Sawday Tunnel Case----the title of this case was Gaspar A. Huffner et al. vs. F. R. Sawday et al., heard in the Superior Court of San Diego County, and appealed to the state Supreme Court.

Very sincerely yours,

Volcan Land & Water Co.

Water Rights

Papers furnished Mr. Eshelman

May 1915

4. Historic Outline of the Volcan System.

The initial project on the San Luis Rey River was a power project of the Pacific Light and Power Co. of Los Angeles proposing the Warner Reservoir and the identical Warner canal for the first 5 miles but continuing the same to a total length of 14 miles to a point immediately above the Rincon Reservation where a fall of 1600 feet was to be secured.

The P L & P Co. employed Mr. Fletcher to secure the riparian rights on the lower river which was largely done by purchase of the lands. Later due to the abandonment of the proposed ^{electric} line to San Diego, nothing further was done by these people except to hold the lands and riparian releases. In December 1910 Mr. Henshaw acquired the riparian holdings of the Pacific Light & Power Co. ^{and} for a quarter interest in the Warner Ranch. He also purchased the remaining three-fourths interest in Warner Ranch from the Vails. Some of the lands of the P. L & P Co. had been sold retaining the riparian rights to individuals, but most of the lands were sold to the South Coast Land Company. Various deeds were made. The intent of all of which were to transfer ^{to Mr. Henshaw} the riparian rights with reference to the diversion of Warners Ranch out of the watershed, but not necessarily consenting to anything else. Surveys of the P. L. & P. Co. were acquired and in February 1911 additional surveys were made. A series of water filings were posted from March 16, 1911 to May 15, 1913.

At the same time the Santa Ysabel waters were considered as part of the project and steps taken to acquire the lands owned by the Linda Vista District. This district was then delinquent and defaulting. It had been organized about 1896. It was the successor of the Pamo Water Company from which it had purchased the lands of the Pamo Reservoir site and 80 acres in the Santa Maria reservoir site together with physical construction consisting of a wagon road some 6 miles long which cost about \$7,000 and some exploration at the Pamo Damsite. The original surveys of the Pamo Water Company were purchased from C. S. Alverson for \$500. Filings were made on the Santa Ysabel River on June 13, 1911 at the Pamo Damsite, on December 14, 1912 at the Sutherland Damsite upon land which had then recently been purchased and on February 21, 1914 at the Carroll Damsite on public land. On May 7, 1913 filings were made on the Black Canyon tributary of the Santa Ysabel.

The general plan was to impound the water of the San Luis Rey in Warner Dam, conduct this water by the Warner Canal about 8 miles long, piercing the divide between the San Luis Rey and the Santa Ysabel utilizing a power drop of 1500 feet. The tail waters of the power plant would flow into the margin of Pamo Reservoir. The Pamo Reservoir was proposed nearly on the original site of the Linda Vista Irrigation District and the original plan of the Pamo Canal was adopted with certain changes in the ^{line.} land. The original purpose for use of the water was to place it upon the Linda Vista Mesa and the supply of the City of San Diego was not originally contemplated.

The Santa Maria Reservoir ~~was~~ consisted of a local reser-

voir which would feed into the Pamo conduit. At a later period the strategic advantage of the Sutherland Reservoir was recognized on account of the possibility of its prior use for power purposes and an entirely different route of conveying the water through the Ramona Valley directly into the La Mesa Irrigation District then forming, or the City of San Diego.

The Carroll Reservoir was filed on early in 1914 because of the possibility of interference and prior construction presumably by the City of San Diego at this site. The Volcan Company obviously having no water right below the Pamo Dam and the water right to the considerable area between the two dams would be competitive to their sale of water as well as diminishing their rights. At various times negotiations were taken up with capitalists to sell the power project and to purchase lands and finance the irrigation project. In December 1913 the City of San Diego informally and soon thereafter formally, through the Water Commission, made overtures to Mr. Henshaw looking to a purchase of the present holdings of the Volcan Company. An option was issued by Mr. Henshaw in May 1914 looking to action within two or three months by the City. A report jointly to the City and the Company was prepared by Mr. Harroun on the value of the property. The Fall of 1914 passed without any definite action by the City. A few months ago Messrs. O'Shaughnessy and Lippincott were asked by the City to again report on the property which has just been filed with the City.

In detail the proposition to the City modified to a certain extent the original plan of the Company. It consisted of building that portion of the Warner conduit to the Divide and pouring the water into Santa Ysabel, thence neglecting for the present the

4

Pamo Reservoir to ^{allow} where the waters ~~do~~ ^{flow} ~~to~~ ^{down the natural channel} the Carroll Reservoir. At this point a pumping plant was to be erected with a capacity of 10 million gallons daily and deliver the water by pipe line 20 miles long to the City. This plan was desired by the Water Department with the view of securing "quick water". The reasons for exactly this development have disappeared on account of the generous run-off of this year and the City is no longer in immediate want of water.

During this entire period Mr. Henshaw was perfecting the riparian purchases on the San Luis Rey River which are now practically complete. He also made certain purchases on the Santa Ysabel River. The Linda Vista bonds were bought up, the title to the lands cleared and the District dissolved. Certain negotiations were had with the City of Oceanside and adjoining land owners relative to Mr. Henshaw financing a local water development for the Oceanside region. But this did not contemplate the uses of the waters of Warner Dam. But nothing came of this.

2

The places of intended use in the Nelson and Post filings are declared to be the Coast regions from Carlsbad to Del Mar. The Lull and Mathews filings refer specifically only to four sections on the Linda Vista Mesa and "other private" lands.

The Isbell filing of May 15, 1913 recites all Spanish Grants and townships from Carlsbad to Del Mar including Escondido and further all lands of Linda Vista Irrigation District, (then in existence).

None of these filings show the City of San Diego as a place of intended use.

5. Complete Data and Work Stories

(a) Warner Dam.

Previous to water filing surveys were made of Warner Dam by W. S. Post for P. L. & P. Co. December 1905 to January 1906; also February 1911.

Water filing by

A. H. Nelson	50,000 M I	March 16, 1911
W S Post	50,000 M I	" 17, 1911
G B Lull	50,000 M I	May 20, 1911
Lou B. Mathews	50,000 M I	" 20, 1911
W J Isbell	50,000 M I	" 15, 1913

The Nelson filing was obviously to checkmate any slips in the pending purchase of Warner Ranch, and therefore posted on land in possession of Wm. G. Henshaw directly west of Ranch line.

Post's filing was within the Ranch and at the Damsite.

Both Nelson and Post's filing recite purpose of "sale, rental and distribution". It was thought afterwards that this was an error and the private character of the purpose should be emphasized. Whereupon the Lull and Mathews notices were posted within and without the Warner Ranch.

All four notices mention power use, but in reposting notices to secure "private purposes", the effective date of the Water Commission Bill of 1911 was passed. In subsequent proceedings for U. S. Forest Reserve rights of way, this became a flare-back, as the Water Commission protested to Forest Service, that no power application had been granted and the Volcan Water Company withdraw its request for power use and received permanent right of way for irrigation and domestic only.

Present Expenditures

Volcan Land and Water Company

May 20, 1915.

Warner Dam

Concreting Outlet Tunnel		
2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	18.00	\$ 35.70
Cook House		
Cook		2.25
Total daily at Warner's		\$ 37.95

Pamo Dam

1 man at	\$ 2.50	
1 man at	2.25	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.03	
Material	2.50	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
6 Head Mules at 1.50 (including feed)	9.00	
material	4.00	\$ 33.50

Resume

Warner Dam	\$ 37.95
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	=====

Expenditures Volcan Land & Water Co.

through office of W. S. Post.

March 1915

Water Measurements	\$ 257.91
Warner Dam	539.77
Pamo Dam	75.00
Carroll Dam	197.34
Engineering	346.11
Office	129.33
Compensation Insurance	<u>144.01</u>
	\$ 1,689.47
	=====

July 1, 1915.

Mr. Ed Fletcher,
Manager.

Dear Sir:-

I should suggest as subjects for your conference at San Francisco the following:

1. That Mr. Eshleman be asked to furnish a preliminary opinion as to the amount of work and where it is to be prosecuted as a guide to the handling of the present force.
2. That the plan for quick utilization of water on both the San Luis Rey and at the Carroll Reservoir be seriously considered as outlined in an accompanying letter from the legal standpoint.
3. That various selected contractors be consulted along the lines of taking bonds secured at first by the owners and later to be converted into mutual district bonds or municipal bonds. Aside from the pipe and machinery people I should suggest not the largest contractors such as McCarther Brothers, but men of considerable means and reputation who are at present seeking opportunity to utilize their plant and whose financial standing is sufficient to allow them to carry their own work for a considerable period.

The names suggested for interview are

Redwood Manufacturers Co., 806 Kohl Bldg., San Francisco.
East Jersey Pipe Co., San Francisco. (Represented by Mr. Nesbitt, Balboa Hotel, Los Angeles for the Southern territory.
Arthur Bent, Central Bldg., Los Angeles, Cement contractor.
(Builder of the extension of the Sweetwater Dam)
Carl Leonardt, Los Angeles.
F. O. Engstrum Co., Los Angeles.

Yours very truly,

WSP-BK

July 1, 1915.

Mr. Ed Fletcher,
Mgr V L & W Co.

Dear Sir:-

My suggestion regarding increased construction without a large immediate outlay is as follows:

Contract with certain large contractors such as the East Jersey Pipe Company represented on the coast by Mr. Nesbitt who assures me that they are able to carry bonds to any extent providing of course they are satisfied with the bonds. Bonds which are approved by the State Railroad Commission are satisfactory to them. Such a contract would cover the pipe construction.

In a similar manner the larger contractors such as Arthur Bent of Los Angeles, I should imagine at this time would be very glad to undertake the labor portion of construction receiving bonds in payment. The principle item of cost in dam construction being cement, which I take it for granted Mr. Henshaw would carry through the cement company.

A pumping plant as required could, I believe, be turned on the same terms, say with the Worthington Pump people, the Pelton Company or the Busch Siltzer Diesel Engine Company.

I have already outlined the suggested immediate use of water from the Carroll Dam on both banks of the River. The cheapest development is a pipe line on the north bank traversing the upper mesa of the Santa Fe Ranch and thence to the coastal mesa of Encinitas. Such a line could be laid down very rapidly and immediate utilization of water secured. On the south bank development you are already familiar with the Carroll-University pipe line to the Linda Vista mesa which, however, calls for somewhat larger expenditure, but one, however, which would fall exclusively under a contract such as is proposed with the East Jersey Pipe Co.

Mr. Nesbitt is now in San Francisco at the Stuart Hotel and I have telegraphed him to call on you at Mr. Henshaw's office in San Francisco.

In addition the Redwood Manufacturers Co., 806 Kohl Bldg., San Francisco, have been very urgent in getting an

Mr. Ed Fletcher. #2.

opportunity to bid on the Carroll-University line and I should certainly advise a conference with these people. I have personally no objection to the use of Redwood pipe except that I would specify rods of American Ingot iron instead of the ordinary steel.

I have already explained the program of utilization at Warners, which particularly appeals to me:

Negotiate with Wohlford for the half use of the Escondido canal temporarily run the water down Escondido Creek to Kelley lands or other lands which you own on the Coast. Your water rights, of course, would be beneficial use of Warners Dam, securing storage, and the next step a power plant to the head of the Escondido Ditch.

As long as you are utilizing the water on your own lands and retain title to them, you are still in a position to transfer to the City of San Diego, but you can add to the price already named the anticipated profits on the lands which you had begun to irrigate and would again allow to become desert.

Very sincerely yours,

Papers Requested by Mr. Eshelman

1. Copies notice of appropriation at all points of diversion, with date of filing and recordation.
2. Copies of contract with Escondido Water Co., together with all correspondence with Departments of the Federal Government with relation to rights of way across Indian Reservation.
3. Copies of report of Lippincott, O'Shaughnessy and Harroun on Volcan system.
4. General outline of system, with historical and other data, so as to give general understanding, without detail, of the system.
5. Warners Ranch Dam: Capacity; cost of dam; date of beginning of work; amount expended to date; number of men now employed and in what capacity; also give note as to continuity of employment and fluctuation in number of men, with reasons therefor.

Similar information for other damsites, conduits, and other portions of the system.
6. Additional information, showing relationship between the amount of water that can be impounded in various damsites, at proposed heights, to total flow of river at said points.

Likewise, relationship of quantity of water, if any, originating in the catchment area of each dam in excess of the capacity of such dam to
 - a. Adjudicated claims below the point of such damsite
 - b. Asserted claims.
7. Claims of every character, so far as known, on the streams involved adverse to the Volcan Co., with amounts, and such historical data as is available.
8. Information on Sawday Tunnel case.
9. Overhead expenses, (engineering, etc.)
10. Copies of contract and information bearing upon the negotiation with the City of San Diego, showing length of time involved.

Volcan Land & Water Co.

Water Rights

Papers furnished Mr. Eshelman

May 1915

4. Historic Outline of the Volcan System.

The initial project on the San Luis Rey River was a power project of the Pacific Light and Power Co. of Los Angeles proposing the Warner Reservoir and the identical Warner canal for the first 5 miles but continuing the same to a total length of 14 miles to a point immediately above the Rincon Reservation where a fall of 1600 feet was to be secured.

The P L & P Co. employed Mr. Fletcher to secure the riparian rights on the lower river which was largely done by purchase of the lands. Later due to the abandonment of the proposed ^{electric} line to San Diego, nothing further was done by these people except to hold the lands and riparian releases. In December 1910 Mr. Henshaw acquired the riparian holdings of the Pacific Light & Power Co. ^{and} for a quarter interest in the Warner Ranch. He also purchased the remaining three-fourths interest in Warner Ranch from the Vails. Some of the lands of the P. L & P Co. had been sold retaining the riparian rights to individuals, but most of the lands were sold to the South Coast Land Company. Various deeds were made. The intent of all of which were to transfer ^{to Mr. Henshaw} the riparian rights with reference to the diversion of Warners Ranch out of the watershed, but not necessarily consenting to anything else. Surveys of the P. L. & P. Co. were acquired and in February 1911 additional surveys were made. A series of water filings were posted from March 16, 1911 to May 15, 1913.

At the same time the Santa Ysabel waters were considered as part of the project and steps taken to acquire the lands owned by the Linda Vista District. This district was then delinquent and defaulting. It had been organized about 1896. It was the successor of the Pamo Water Company from which it had purchased the lands of the Pamo Reservoir site and 80 acres in the Santa Maria reservoir site together with physical construction consisting of a wagon road some 6 miles long which cost about \$7,000 and some exploration at the Pamo Damsite. The original surveys of the Pamo Water Company were purchased from C. S. Alverson for \$500. Filings were made on the Santa Ysabel River on June 13, 1911 at the Pamo Damsite, on December 14, 1912 at the Sutherland Damsite upon land which had then recently been purchased and on February 21, 1914 at the Carroll Damsite on public land. On May 7, 1913 filings were made on the Black Canyon tributary of the Santa Ysabel.

The general plan was to impound the water of the San Luis Rey in Warner Dam, conduct this water by the Warner Canal about 8 miles long, piercing the divide between the San Luis Rey and the Santa Ysabel utilizing a power drop of 1500 feet. The tail waters of the power plant would flow into the margin of Pamo Reservoir. The Pamo Reservoir was proposed nearly on the original site of the Linda Vista Irrigation District and the original plan of the Pamo Canal was adopted with certain changes in the ^{line} land. The original purpose for use of the water was to place it upon the Linda Vista Mesa and the supply of the City of San Diego was not originally contemplated.

The Santa Maria Reservoir ~~was~~ consisted of a local reser-

voir which would feed into the Pamo conduit. At a later period the strategic advantage of the Sutherland Reservoir was recognized on account of the possibility of its prior use for power purposes and an entirely different route of conveying the water through the Ramona Valley directly into the La Mesa Irrigation District then forming, or the City of San Diego.

The Carroll Reservoir was filed on early in 1914 because of the possibility of interference and prior construction presumably by the City of San Diego at this site. The Volcan Company obviously having no water right below the Pamo Dam and the water right to the considerable area between the two dams would be competitive to their sale of water as well as diminishing their rights. At various times negotiations were taken up with capitalists to sell the power project and to purchase lands and finance the irrigation project. In December 1913 the City of San Diego informally and soon thereafter formally, through the Water Commission, made overtures to Mr. Henshaw looking to a purchase of the present holdings of the Volcan Company. An option was issued by Mr. Henshaw in May 1914 looking to action within two or three months by the City. A report jointly to the City and the Company was prepared by Mr. Harroun on the value of the property. The Fall of 1914 passed without any definite action by the City. A few months ago Messrs. O'Shaughnessy and Lippincott were asked by the City to again report on the property which has just been filed with the City.

In detail the proposition to the City modified to a certain extent the original plan of the Company. It consisted of building that portion of the Warner conduit to the Divide and pouring the water into Santa Ysabel, thence neglecting for the present the

Pamo Reservoir to ^{allow} where the waters ~~to~~ flow ^{down the natural channel.} to the Carroll Reservoir. At this point a pumping plant was to be erected with a capacity of 10 million gallons daily and deliver the water by pipe line 20 miles long to the City. This plan was desired by the Water Department with the view of securing "quick water". The reasons for exactly this development have disappeared on account of the generous run-off of this year and the City is no longer in immediate want of water.

During this entire period Mr. Henshaw was perfecting the riparian purchases on the San Luis Rey River which are now practically complete. He also made certain purchases on the Santa Ysabel River. The Linda Vista bonds were bought up, the title to the lands cleared and the District dissolved. Certain negotiations were had with the City of Oceanside and adjoining land owners relative to Mr. Henshaw financing a local water development for the Oceanside region. But this did not contemplate the use of the waters of Warner Dam. But nothing came of this.

5. Complete Data and Work Stories

(a) Warner Dam.

Previous to water filing surveys were made of Warner Dam by W. S. Post for P. L. & P. Co. December 1905 to January 1906; also February 1911.

Water filing by

A. H. Nelson	50,000 M I	March 16, 1911
W S Post	50,000 M I	" 17, 1911
G B Lull	50,000 M I	May 20, 1911
Lou B. Mathews	50,000 M I	" 20, 1911
W J Isbell	50,000 M I	" 15, 1913

The Nelson filing was obviously to checkmate any slips in the pending purchase of Warner Ranch, and therefore posted on land in possession of Wm. G. Henshaw directly west of Ranch line.

Post's filing was within the Ranch and at the Damsite.

Both Nelson and Post's filing recite purpose of "sale, rental and distribution". It was thought afterwards that this was an error and the private character of the purpose should be emphasized. Whereupon the Lull and Mathews notices were posted within and without the Warner Ranch.

All four notices mention power use, but in reposting notices to secure "private purposes", the effective date of the Water Commission Bill of 1911 was passed. In subsequent proceedings for U. S. Forest Reserve rights of way, this became a flare-back, as the Water Commission protested to Forest Service, that no power application had been granted and the Volcan Water Company withdraw its request for power use and received permanent right of way for irrigation and domestic only.

The places of intended use in the Nelson and Post filings are declared to be the Coast regions from Carlsbad to Del Mar. The Lull and Mathews filings refer specifically only to four sections on the Linda Vista Mesa and "other private" lands.

The Isbell filing of May 15, 1913 recites all Spanish Grants and townships from Carlsbad to Del Mar including Escondido and further all lands of Linda Vista Irrigation District, (then in existence).

None of these filings show the City of San Diego as a place of intended use.

Capacity of Reservoir

Proposed maximum depth of water is 90 feet for which capacity is ----- 117,000 acre ft.

Cost of Dam

95 ft. high for above capacity is \$324,600.

Date of Beginning Work

On March 12, 1911, a field party under direction of Post were engaged in locating the 6th to 12th mile of the Warner Conduit.

Work at Damsite proper began by arrival of a camp at Warner Dam (Filed letter WSP to M Dulcy May 21) as follows:

Arrived at camp May 13th.
 Worked May 14th
 Worked May 16th
 Work discontinued May 17th or 18th.

The work consisted of erecting tents and building permanent wood kitchen and eating quarters, and building some 100 feet of diversion flume, preparatory to exploring bed rock.

Orders were received May 17th to discontinue promptly on account of a disagreement as to purchase of Warner's Ranch.

The payroll was as follows:

Warner Water Project.
 (Right of Way Notes & Prospecting for Bed Rock)
Pay Roll, May 1st to May 20th.

W S Post	Engr.	12 days at \$10.00	\$120.00
J T Holbert	Assistant	6 1/2 days at \$ 3.50	22.75
D W Shellhamer	Carpenter	4 days at \$ 4.50	18.00
Fred Nihel	"	4 days at \$ 3.50	14.00
Gus Holmes	Cook	7/31 mo. at \$50.00	11.30
Wm. Dyke	Laborer	5 days at \$ 1.75	8.75
Wm Dyke horse	Camp horse	2 days at \$ 1.50	3.00
			<u>\$197.80</u>

Various material purchases were also made between May 5th and 20th including centrifugal pump \$210.00.

The delay on May 18th lasted only to about June 8th when a force of 6 to 20 men and 8 to 12 horses worked continuously on bedrock excavation and placing a out-off wall. The total construction expenditures were as follows:

<u>1911</u>	
May	\$751.
June	2082.
July	1873.
August	2775.
September	5232.
October	3835.
November	602.
December	<u>186.</u>
	\$17,336.

For 1912, Harvey Davis as Assistant Engineer remained at the dam, conducted water measurements, and executed surveys of the reservoir.

Core drill operations were begun in November 1911 and continued until May or June 1912, expenditures about \$10,000.

The average expenditure for water measurement (Davis, Ass't Engr. or W J Isbell, hydrographer, being continuously on the ground) was \$90 per month.

Aside from surveys, water supply, core drilling, etc., no further construction was undertaken in 1912.

In 1913, Hydrographer continuously on the ground, expense about \$90 per month.

July 8th 1913 started excavation of portals of Warner Outlet Tunnel.

By October 9, 1913 work began on Tunnel proper and has been continuous to date.

Total Expenditure to April 1st, 1914 chargeable to Warner Dam is

Out-off Wall Excavation	\$3878.
" " Concrete	3884.
" " Pumping during	
Excavation and concreting	4726.
Gate Tender's House	1710.
Plant - Mach. and tools	3876.
Camp erection & equipment	2181.
Core Boring	10000.
Outlet Tunnel - E Portal Excav.	1000.
" " - W " "	692.
Tunnel proper	4822.
Lining Tunnel	<u>8592.</u>
Total (without overhead)	\$ 45,351.

Number of Men now Employed - May 20, 1914

Concreting floor of outlet tunnel

1 Foreman	at \$4.20	\$ 4.20
1 Gas Engineer	at \$3.00	3.00
1 Cement Worker	at \$3.00	3.00
2 Laborers	at \$2.50	<u>5.00</u>
Total Labor		15.20

Also

1 team	at \$2.00	2.00
Material - mostly cement and gasoline		
per day		<u>18.00</u>
		\$ 35.20

5 (b) Warner Conduit

Previous to water filing surveys were made of Warner conduit by W S Post for Pacific Light & Power Co. in 1905 to 1906. Also in February 1911.

Water filing March 16, 1911. March 12th to April 29th field surveys were made especially on the lower end of the Warner conduit, the expenditure being \$733 for engineering payroll and at least \$60 in expenses. No further work was done directly on the conduit but on May 10th work was begun on the Warner Dam as already described.

In January 1912 Fletcher and Post took up the adjustment of Escondido which was later formed into a contract dated June 21, 1912 and shown in Exhibit 2.

From March 1912 until July 1913 it would appear that Mr. Hawgood was more or less engaged on preparation of right of way maps and securing their acceptance by the United States Interior Department. During this period Mr. W. L. Huber, District Engineer of the Forest Service, under date of April 19, 1912 reported to the Forester on the rights of way of Warner Canal and Pamo Canal. (See Exhibit 11).

Also during this period (March and April 1913) Mr. Hawgood placed a party in the field and resurveyed certain portions of the line securing additional topography. The record of this expenditure is in Mr. Henshaw's office in San Francisco and will be furnished later. No further construction work was done.

On April 1, 1913 a camp was established near the 5th mile of the Warner conduit and work started upon a construction road 1 mile in length to connect the county highway with the portal of the long tunnel. This was prosecuted until July 8th when the workmen were transferred to Warner Dam tunnel. The total expenditure for constructing roads in connection with the Warner Conduit to date has been \$2,268.00 without overhead.

On November 17, 1913 work was begun on the excavation of the first mile of the Warner conduit. This was completed on March 5, 1914. The total expenditure was \$2,960.00. Since that time no work has been done directly on the Warner conduit.

5 (c) Sutherland Dam

About 160 acres and the damsite at Sutherland were purchased in the Fall of 1912 and the water filing made December 14, 1912. Previous to this time Dessery & West for Mr. Hawgood had made a survey of the reservoir site.

By February 12, 1913 ^{Surveys and} clearing was commenced upon the Ramona conduit which is the conduit leading from Sutherland Dam. A hydrographer was employed who visited Sutherland every week, an automatic register installed, the average and continuing expense chargeable to Sutherland Dam water measurements being about \$30.00 a month. No other construction work was done upon the Dam until April 13, 1915.

Road work was then started for a road connection with the main county highway necessary for the hauling in of the materials for the Dam. This outfit consisted of 8 men and 6 mules and they have been working continuously to date.

The number of men employed on May 20, 1915 is as follows:

1 Foreman	at \$3.50	\$3.50
1 powder man	at \$2.75	2.75
3 teamsters	at \$2.50	7.50
3 laborers	at \$2.25	<u>6.75</u>
Total labor		\$20.50
Also 6 mules	at \$1.50	9.00
And material		<u>4.00</u>
Total daily expenditure		\$33.50

5 (d) Ramona Conduit

This conduit begins at the Sutherland Dam and will carry the water from this dam a distance of 4 miles into the drainage basin of the Santa Maria Creek. Thence it may follow the natural channel of the Santa Maria Creek to the Santa Maria Reservoir and thence by feeder back to the Pamo Canal. It is also possible from the end of the Ramona conduit to deliver the water by very direct route either to the San Diego Flume or by pipe line to the City of San Diego or by a pipe line to the San Clemente Reservoir.

On _____ to _____ a survey for right of way was executed by W S Post. An application was prepared to the U S Interior Department asking for a right of way for the main purpose of irrigation. During

the entire time of the preparation of this application one laborer was employed at an expense of \$2.00 a day in brushing or trail cutting along the line. In addition to this expense was the hydrographic expense of about \$30 per month continuous at the dam already described. during this period. Upon the filing of the application with of the laborer the Interior Department, work/was discontinued because the application is within a Forest Reserve and therefore protected by the provisions of a State Law which does not require work while the application is pending.

This application was filed about June 1st, 1913, and granted about July 1st, 1914, as an irrigation right of way, stipulating that if power use was desired, an additional application would be made. Since July 1st, 1914 no construction work has been done directly on this conduit aside from the hydrographic work already mentioned, a small amount of grading about April 15th to 17th, 1915 on the conduit itself, and the construction road already mentioned under Sutherland Dam now in progress.

5 (e) Black Canyon Feeder

The purpose of this feeder is to divert the water of the Black Canyon, a tributary of the Santa Ysabel, having a watershed of 17 square miles into the high water line of the Sutherland Reservoir. A water filing was posted on May 7, 1913. On July 22, 1913 survey was commenced for this feeder and completed within two weeks. An application was made for a temporary permit or "Special Use Permit" to the Forest Service. On September 24, 1913 this "Special Use Permit" was issued covering that portion of the survey about 2 miles in length upon Forest Reserve lands.

It should be noted that the upper half mile of this ditch is upon an Indian Reservation and the intake. Permit has not issued for this portion of the conduit. The water notice also is pumping on Indian Reservation. No further work has been done on the Black Canyon Feeder since the granting of the temporary permit.

Stipulation 7 of the Permit states that construction work shall begin with one year and be completed within 2 years and Stipulation 8 states that the permit is not transferable (Section 3737 U S Revised Statutes) and shall terminate upon breach of any of the conditions or at discretion of the Forestry.

The gaging station has been established since February 1913 on Black Canyon and the proportional charge for hydrographic work is \$15.00 per month continuous up to date.

The Company has presumed that the Black Canyon Feeder could be consisted as a part of the Sutherland Dam and Ramona

conduit and no special effort has been made to perform work directly on this feeder.

5 (f) Pamo Dam

The water filing at the Pamo Dam was posted June 13, 1911. Somewhat before this negotiation looking into the settlement of the Linda Vista bonds had begun. The land on which the notice was filed was land owned by the Linda Vista District. About September or October a camp was placed at the dam with a foreman and two men who made exploration pits at the Damsite. This foreman and never less than one man have remained constantly at work on this Damsite until date.

By March 1912 in addition an engineering party was engaged in the survey of the Damsite in the location of the Pamo conduits which leads out of the reservoir. These surveys were completed about May 1, 1914. Soon after this date the application for rights of way including 40 acres in this reservoir site was filed and as previously explained was not granted until about July 1913. In the months of May and June 1913 the foreman employed some six men in exploration for bed rock in the stream channel at two different sites by means of shafts.

On November 17, 1913 a core drill was installed with a gang of six men which made complete explorations of the damsite. This work continued to May 1914 when the core drill and gang were moved to the Carroll reservoir site where similar continuous

operations were carried on for the remainder of the year.

In 1913 the construction road originally built by the Linda Vista Irrigation District was repaired and extended and maintained in 1914 and 1915. The date in 1915 being between April 17th and May 1st.

During this entire period a resident hydrographer was maintained at Pamo Dam camp and the proportionate share of hydrographic expense for this station continuous from February 1911 to date is \$30.00 per month. The present expenditure on Pamo Dam consists of

1 care taker	\$2.50
1 laborer on roads	<u>2.25</u>
Total daily expense	\$4.75

5 (g to 1)

The work story of the Pamo Conduit, Santa Maria Reservoir, Santa Maria Feeder, Carroll Dam, Carroll-University pipe line, and San Clemente Dam are in preparation and will be forwarded as fast as prepared.

6. and 7. relating to the hydrographic information and the claims upon the River will be forwarded later.

Point 8 with reference to the Sawday Tunnel case will be forwarded shortly.

Point 9 Overhead Expenses - will be made out in conjunction with the three offices and furnished later. In a preliminary way the monthly expense for engineering is furnished under No. 9.

10. Copies of option and information relative to the City of San Diego are enclosed herewith.

Under No. 11 I furnish some miscellaneous documents.

5 (g) Pamo Conduit

Certain surveys were made on Pamo Conduit in February and March 1911 before. Filing was made at Pamo Dam as before stated on June 13, 1911.

In July 1911 J. H. Lippincott was employed to prepare the application to the Interior Department for rights of way of the Warner and Pamo Canals; the surveys for this purpose being practically complete from the former surveys purchased by Mr. Henshaw and additional field work of February, March and April 1911.

Office work and expense on this application continued through July, August, September and October, 1911. On September 11th - 14th a field survey was made in connection with further data for the application.

On November 13, 1911 a field party was organized to locate the Pamo Conduit, take cross-sections and prepare estimates of yardage and plans for structures. This continued until February 1, 1912; the total expenditure being at least \$4,000.

Work on the repair of the construction road parallel to the first five miles of the conduit was carried on the Fall of 1911 and Spring of 1912, by the foreman at the Pamo Dam, when not engaged on test pits, etc., at the dam.

After the filing of the application for right of way little or no work was done on the Pamo Conduit proper.

On April 24th - May 10, 1915, work was done in repair of above mentioned construction road, and placing additional culverts.

5 (h) Santa Maria Reservoir

No water filing has ever been placed on the Santa Maria Creek by the Volcan Company. 120 Acres including the dam site are in the ownership of the Company. Surveys were prosecuted in February and March 1912 to tie in the original surveys (Linda Vista Irrigation District). In November 1912 hydrographic records were begun, the amount chargeable to this station being \$15.00 per month.

In 1913 an automatic gage and shelter were placed at an expense of about \$100.

No work aside from hydrographic records is being done on the site.

The site is all on private land and was not included in United States Right of way applications.

5 (i) Santa Maria Feeder

This feeder is about 1 mile long and is planned to put the waters of Santa Maria Creek into the Pamo Conduit. It was surveyed in March 1912, and became part of the U. S. Right of Way application, which as before stated was filed about May 1912 and granted January 16, 1913.

No work has been done on this feeder.

5 (j) Carroll Dam

This dam is the third and lowest of dams proposed on the Santa Ysabel River.

The filing was made February 21st 1914, on unsurveyed public land.

All private lands in the reservoir site were under option at the time of purchase, and are now held by the Company, with the exception of the Bernardo Rancho in the upper portion of the basin which is in litigation. Forty acres of surveyed public land in the site were purchased by scrip and the damsite 40 acres were purchased through unsurveyed land scrip, costing \$2,000, although the patent can not issue until U S Survey is made.

A few acres of public land remain and an application for easement under laws of 1891 was made to Interior Department, together with right of way for Carroll - University pipe line.

The survey for this application was begun April 11, 1914 and completed May 12, 1914. Further survey was made later on the canal line leading from the dam.

On November 9, 1914 application for easement was filed and is still pending (June 1915).

Late in May 1914, core drilling apparatus was placed on the site and drilling for bed rock continued until September 15, 1914 after which a caretaker, who did brushing, etc., was employed during September, October, November and December 1914. On January 1, 1915 a foreman and 2 men were put on which has continued to date.

The daily expenditure on May 20, 1915 at Carroll Dam was

1 Foreman	\$4.00
1 laborer	2.50
1 "	1.75
Material	2.50
Total	\$10.75

5 (k) Carroll - University Pipe Line

In connection with the Carroll Dam, this pipe line would supply by pumping the Linda Vista Mesa and the City of San Diego.

A survey was made in August and September 1914 locating the Line, but no further work has been done.

5 (l) San Clemente Reservoir Site

All lands in the Reservoir site is purchased. The water right matter is negligible, as the site lies in an unimportant local drainage of only a few square miles. It will serve as a receiving and distributing reservoir.

A topographic survey was made in 1912 and land corners established in 1915, but no other work has been done here.

5. Engineering and construction expenditures on above units are as follows to Date of April 1, 1915:

(a) <u>Warner Dam</u> as stated		\$45,361
(b) <u>Warner Conduit</u>	\$ 4,867	
Surveys about	4,000	
Roads "	1,000	9,867
(c) <u>Sutherland Dam</u>		
Up to April 1, 1915, say	\$ 200	
April and May "	1,500	1,700
(d) <u>Remona Conduit</u>		
Surveys	\$ 700	
Labor - about	300	1,000
(e) <u>Black Canyon Feeder</u>		
Surveys, about		200
(f) <u>Pamo Dam</u>		
Test pits Site "B"	\$ 2,066	
Core Drill " "B"	2,326	
Test Pits " "D"	189	4,581

(g)	<u>Pamo Conduit</u> Surveys about Construction roads about	\$ 4,000 <u>2,000</u>	\$ 6,000
(h)	<u>Santa Maria Reservoir</u> Surveys		200
(i)	<u>Santa Maria Feeder</u> Surveys		100
(j)	<u>Carroll Dam</u> Surveys and construction Legal	\$ 3,202 <u>508</u>	3,710
(k)	<u>Carroll-University Canal</u> Surveys		800
(l)	<u>San Clemente Reservoir</u> Surveys		200

5 (a) Warner Dam

The following are the estimates of safe yield in

Acre Feet:

	<u>Safe Yield</u>	<u>Turned out for Escondido contract</u>	<u>Remaining safe yield to be diverted</u>	<u>M. I.</u>	<u>Maximum capacity required Ac. Ft.</u>
Harroun, 1914	17,600	742	16,854	1,160	106,300
Post 1914	21,720	802	20,918	1,430	117,000
Lippincott (#) 1915	15,400?	900?	14,500?	1,000?	120,000?

- Unofficial, subject to correction when report is received.

It will be practically correct to say the available continuous safe yield at Warners Dam, will be at least 1065 M. I.;

Prior Rights

Escondido Ditch The terms of the agreement are calculated to require the turning out of 900 acre feet or 65 M. I.

Rincon Indians U. S. will probably claim that no change in the regimen of the River shall be made which will affect the summer flow. It will be understood that historically the Escondido people ceased to divert by June 1 of each year to avoid any complication. An additional reason was that any diversion of theirs less 200 M. I. was all lost in spillage and failed to go through to outlet of their ditch.

My theory is then that during the summer months, the Volcan Company will have ^{to be} turned out the historic summer flow past Warners

Dam, from June 1 to say October 1, when irrigation ceases and streams begin to "rise" due to decrease in evaporation.

This summer flow at Warner Dam has been, June 1 - Oct. 1:

	<u>Acre Feet</u>
1911	405
1912	511
1913	323
1914	360
Average	400 Acre Ft.
"	28 continuous M. I.

Such an agreement has not been entered into with the Indian Service, but I believe it is entirely feasible to obtain a contract, and that this would be the extent of demands.

Therefore of the total available at Warners 1065 M. I.

Deduction is required for	Escondido	55	
	Rincon	<u>28</u>	<u>93</u>
			972 M. I.

Aside from the Rincon Reservation riparian agreements are complete for the first 20 miles of the River, and no other water need be turned out. This brings us to the Pala Indian Reservation Ditch.

Pala Indian Ditch

The drainage area of the San Luis Rey for Warners

Dam is -----	210 square miles
Escondido Intake is -----	243 " "
Pala Indian Ditch is -----	318 " "

Between the Rincon Reservation and the Pala Indian Ditch is some 8 miles of broad sandy river bed. This has no surface flow after June 1st but acts as a great storage basin for flood waters,

which later filter out at the intake of the Pala Ditch. The consensus of opinion is that the annual recharge of these gravel beds is amply provided for by

(a) Drainage area below Warner Dam and above Escondido Intake, 33 sq. miles yielding floods in excess of the capacity of the Escondido ditch to divert.

(b) Drainage area - below the Escondido Intake, 75 sq. miles

In all providing an average annual runoff of ----	38,500 ac.ft.
Deduct stoppage by Warners -----	<u>20,000</u>
	18,500

Deduct diversion from 33 sq. miles immediately Escondido Intake, = by Intake over and above turned out at Warners -----	<u>3,100</u>
---	--------------

Leaving for saturation of gravels -----	15,400 Ac.ft.
---	---------------

Historically the summer flow at head of Pala Indian ditch has been as follows (See U S Geological Survey Water Supply Paper #500) as measured at the U S Station immediately above the ditch Intake.

The mean flow in Miners Inches available for Pala Ditch,
June 1 - October 1, during 11 years:

	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
1904	540	190	100	100	
1905	1150	205	150	130	
1906	3295	950	509	185	
1907	1140	164	71	111	
1908	370	150	170	100	
1909	312	268	257	250	
1910	273	-	-	-	
1911	230	-	-	-	
1912	311	178	156	169	
1913	215	156	169	118	
1914	225	134	54	69	
Average M.I. or Average Ac. Ft	733	266	182	136	1600

As shown before at Warner Dam there was normally flowing during this period only 400 acre feet (an amount which it is still proposed to allow to pass) and yet 1600 acre ft. were yielded at Pala. This result that at least 3 times as much flows out of the gravels than flows in is considered to be due to the "detaining" action of these gravel beds. It is capable of proof that the water flowing into the upper end of the gravels in June at the Rincon can not advance to Pala by October, on account of the low rate of filtration through gravels.

It is along this kind of showing that Mr. Olberg, Supt. of Irrigation Service, Indian Bureau, is satisfied that there will be no effect on the Pala Ditch by the Warners Diversion.

The lands occupied by the Pala Indians were not originally U. S. lands, but were purchased from private owners, including an old ditch in 1904, and therefore here at least the United States has the simple status of a riparian owner who has made use of water.

The showing above made also applies to any further use of water below Pala. All riparian rights except 4 owners have been secured.

The ditches on the River are as follows:

<u>Name</u>	<u>Owner</u>	<u>Max. Diver- sion M.I.</u>	<u>Total Annual Diversion Acre Ft.</u>
Escondido Ditch	Escondido Mutual Water Co.	2,000	4,000
Rincon Ditch	U. S. Indian	100	200
Pala Ditch	"	300	1,000
Morena Ditch	Mrs Morena	50	100
Libby Ditch	Volcan Co. in part and per- haps some shares not pur- chased	80	600
San Luis Rey Irr. Co. Ditch	Volcan in part, other shares outstanding	125	500
Goldbaum or Mission Ditch	Abandoned	50	

Ditches 1, 2 and 3 have been already discussed. Ditch 4 is immediately below Pala Ditch and governed by the hydraulic conditions already stated.

Ditches 5 and 6 are flood water ditches ceasing diversion usually by June 1st, on account of drying up of river bed. They both have temporary brush mattress headings replaced annually after floods cease, and both require pumping plants on the properties sewed to finish the season.

Ditch 7 has been abandoned since 1911 or 12.

The argument of detaining action of gravels and sands applies even more fully to Ditches 5 and 6.

Pumping Plants

Probably 20 pumping plants exist on the River. The larger ones are:

<u>Name</u>	<u>Owner</u>	
Rincon	U S Indian Bureau	- riparian lands
Pala	"	"
Monserate	Johnson	- riparian release obtained
Wind Ranch	Canfield Est.	" " "
South Coast Land Co.	- This is a ^{now} riparian Diversion of 200 M.I. to Carlsbad with consent of City of Oceanside.	
City of Oceanside	- 20 M.I. maximum City Supply. Injunction suit pending against Volcan Co.	

Lee's Report

This report has to do with the Oceanside suit, and a copy is being made for your use. His conclusion is that

After construction of Warners and diversion, the average residual flow at Pala will be (810 M.I.) ----- 11,738 Ac.Ft

The maximum amount required to surcharge the gravels of the river and secure permanency of present regimen is ----- 7,890 "

Average waste into Ocean under new conditions (266 M I) 3,848 "

Lee is still studying dry years and has expressed no opinion.

6 (b) Santa Ysabel River

Relative to storage and use from Sutherland, Pamo and Carroll Dams.

The following are the estimates of safe yield - in Ac.Ft.

Sutherland

	<u>Safe yield all diverted</u>	<u>M. I.</u>	<u>Max. storage required</u>
Harroun - 1914	6,650	455	16,400
Post - 1914	10,110		

Pamo (Sutherland built)

	<u>Safe Yield</u>	<u>Turned out for priorities</u>	<u>Remaining safe yield to be diverted</u>	<u>M.I.</u>	<u>Maximum storage required</u>
Harroun	6,250	3,850	2,400	165	47,500
Post	10,110				

Carroll (Sutherland and Pamo built)

	<u>Safe Yield</u>	<u>Turned out for priorities</u>	<u>Remaining safe yield to be diverted</u>	<u>M.I.</u>	<u>Maximum storage required</u>
Harroun	4,200	1,330	2,870	196	
Post	No estimate				

Lippincott report not yet available.

PRIORITIES

The Santa Ysabel occupies a steep mountain canyon as far as the San Pasqual Valley. There are no complications in the use of water up to this point.

The broad San Pasqual Valley and Bernardo Valley contains about 4,000 acres of arable riparian land. About 2500 acres are now actually under cultivation. The probable present use of water is about 5,000 acre feet, ditches, pumping plants and all and the ultimate riparian development may require 8,000 acre feet. Now the drainage area of the San Pasqual Valley is 300 sq. miles. The proposed Reservoirs of Sutherland and Pamo will exclude 110 square miles leaving 190 sq. miles of drainage area furnishing some natural stream flow (in the Guijito and Santa Maria Creeks) and very considerable floods to recoup the gravels. The amount supplied by this local area of 190 square miles has been determined theoretically only. Post (1914) makes it 3500 acre feet on the average leaving the present requirement to be turned out 1500 acre feet, and the ultimate requirement 4500 acre feet. Harroun's corresponding figure is 3850 acre feet.

The established ditch rights are:

	<u>Max. M.I. capacity</u>	<u>Average use in Acre feet</u>
East San Pasqual Ditch	800	1180
West San Pasqual Ditch	450	1286
Harris or Latta Ditch	50	100

Some 20 pumping plants are scattered through the valley, some used in connection with these ditches and some independent. The total use is very difficult to estimate but may be 500 M.I. capacity of pumps and an annual pumping of 2,000 acre feet.

EAST SAN PASQUAL

A settlement of the relations of the Pamo Water Company and the East San Pasqual water users was made in 1889. The following is a complete copy of this instrument and attached thereto is a map showing who the owners of record are, and the date of the signing of the instrument, and what land was covered.

John B. Judson, et al

In consideration of the benefits to accrue from the building of the works of the Pamo Water Company upon the Bernardo or Isabel River in the County of San Diego, State of California, and of One Dollar (\$1.00) to us paid, we hereby grant individually and collectively unto said company, a Corporation existing under the laws of California, and doing business at San Diego, California, all our rights of every description, both joint and several, either as riparian owners, or appropriators, or grantees of appropriators in and to the waters of the said stream or appertaining to the following described lands lying in the valley known as San Pasqual upon said River and in said County and State, to-wit: All lands owned by us in Sections 35 and 36, Tp. 12 South, Range 1 East, S. B. M.

This grant is to include all our rights under an appropriation of thirteen hundred and fifty (1350) miners inches of water, measured under a four (4) inch pressure, made under the laws of California in the year 1876, by John Judson, A. F. Brown, W. B. Stewart, John Clevinger, and Archibald Clevinger, and is to operate as a perpetual right to impound, divert and carry away the waters of said stream, at point on said stream within two miles of the lower end of Pamo Valley on said stream. And the said Company is hereby constituted the sole and perpetual # of ourselves and of the land above described and of its future owners, tenants, or possessors, to impound and divert the same, and all damages therefor are hereby expressly waived and released. And said grant and said agency shall be and run with the land in the nature of a covenant forever.

And in further consideration of the premises, we grant unto the said Company a strip of land fifty (50) feet wide, for a perpetual right of way, with right of ingress and egress across said land or any of our lands adjoining the same, upon such line as it may hereafter locate the same. Said right of way to be for the aqueduct of said Company and ingress and egress to be for building, maintenance and repairs.

By its acceptance hereof, said Company binds itself to allow the occupants or owners of said lands to take and use on and after January the first, and until June fifteenth of each year after the aqueduct is constructed and in operation, a sufficient amount of water to irrigate the lands heretofore irrigated by the several parties signing this instrument, or their assigns, from such points on its aqueduct above said lands, and in such quantities as they may select, but with connections to be made under the direction of said Company's Chief Engineer, and on and after the fifteenth day of June, and until January first of each and every year, ten (10) miners inches of water measured under a four inch pressure, above center of gravity, for use upon said lands, and taken from such points on its aqueduct above said lands, and in such quantities within the hereinafter mentioned limits as the said owners and occupants or their assigns may select. Said water to be the equivalent of ten (10) miners inches steady flow from June fifteenth to January first of each and every year, but is not to be taken in quantities of less than one inch or more than two hundred inches at once, unless convenient for said Company.

All of the grants, covenants, obligations, rights,

liabilities, etc., herein specified, are to be binding upon and enure to the benefit of the heirs, representatives, grantees and lessees of the grantors, and the successors, and assigns of said Corporation forever.

Upon failure to commence work within ninety days and to prosecute the same in good faith and with due diligence, the rights herein granted are to revert to the grantors until the works are completed, the rights of the grantors are to remain as they now are.

In Witness Whereof, we have hereunto set our hands and seal this 18th day of Sept., 1889.

JOHN B. JUDSON
HENRY JOHNSON
JEUS OESON
A. M. STRIPLIN
A. D. TRUSSELL

Recorded in Book of Deeds 155, page 106.

This instrument brings up several questions. Is it now valid and would it be valid in case the Company did not construct the Pamo Conduit but placed it somewhere else as for instance through the Ramona Valley? If this instrument is valid, the obligation would seem to be the furnishing of an amount of water as now taken by the East San Pasqual Ditch. As above stated is about 12 acre feet until June 15th after which 10 Miners Inches or 12 acre feet per month is stated to be the limit of the Company's obligation to serve.

HARRIS OR LATTA DITCH

William C. Latta as shown on the map granted to the Pamo Water Company all of his rights as riparian owner and appropriator of the waters of the Santa Ysabel River on October 25, 1882 as recorded in Book of Deeds 155, page 255. In spite of this deed the successors of Latta have put to beneficial use about 50 Miners Inches of flood water.

WEST SAN PASQUAL DITCH

There have been several law suits between the West San Pasqual and the East San Pasqual water users and other parties; the most important one was entitled Huffner vs Judson; the plaintiff representing West San Pasqual and the defendant those living in East San Pasqual. Judgment was rendered in the Superior Court (Judge Torrence) of San Diego, April 15th, 1898 as follows:

That the east San Pasqual shall have the full flow of the river at the head of the East San Pasqual ditch from Aug. 15th to January 15th of each year and from January 15th to Aug. 15th the two parties shall alternate in the use of the water. The

plaintiffs or West San Pasqual having the full flow the first twenty days and the defendants the last ten days of each month. Henry Johnson one of the defendants, shall have the use of the water one day in each month.

In accordance with the above decision the water is distributed as follows:

For the West San Pasqual water users.

H G Myers	for right of way in Secs. 33 & 34	30 acres
Wm Dyer	for land in SE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec 33	5 "
Winthrop Dyer	" " " NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 33	5 "
F H Roberts	" " " W $\frac{1}{2}$ Sec 33	60 "
" "	" " " E $\frac{1}{2}$ Sec 32	20 "
Mrs J H Lewes	" " " NE $\frac{1}{4}$ Sec 32	20 "
Nelson Olds	" " " " Sec 30	40 "
Mrs Smith	" " " NE $\frac{1}{4}$ Sec 32	6 "
M Mantiel	" " " E $\frac{1}{2}$ of NW $\frac{1}{4}$ Sec 32	9 "
Huffner	" " " SW $\frac{1}{4}$ Sec 32	50 "
S F Wood	" " " NW $\frac{1}{4}$ Sec 32	80 "
Henry Pratt	" " " S $\frac{1}{2}$ of NE $\frac{1}{4}$ Sec 31	20 "
Norman Hall	" " " S $\frac{1}{2}$ of Sec 32	30 "
E Ward	" " " S $\frac{1}{2}$ Secs 32 & Sec 4 & 5, T 13 S, R 1 W,	75 "
William Little	" " " NE $\frac{1}{4}$ of NW $\frac{1}{4}$ Sec 32	1 $\frac{1}{2}$ "
		451 $\frac{1}{2}$ "

Of the above list Mr. Henshaw has acquired the ownership of the Roberts tract which carries with it 80 acres of this ditch right.

PUMPING PLANTS

No statistics of the pumping plants have been kept by the Company and no information can be furnished by me except that the acreage in use is gradually increasing. Pumping plants as a rule lifting the water from the gravels and applying them on the surface receive their own return waters. We have for this reason maintained for 3 years various stations to observe the level of the water plane in the gravels. The object of these measurements would be to estab-

lish the real measure of damage caused by diversion up stream in the reduction of the water plane if it really does occur.

SAN BERNARDO RANCHO

This original Spanish grant lying across the river has about 6,000 acres originally riparian. There has been, however, a partition and the riparian acreage may be considerably less. The various ownerships of this Ranch are in litigation and it is impossible at the moment to give any further detail regarding this, but it will be supplied later. The back water of the Carroll Reservoir nearly separates the Ranch and therefore it is difficult to say that they can suffer from a reduction of supply of water flowing past the Ranch.

PRIORITIES BELOW CARROLL RESERVOIR

The Carroll Reservoir itself is in a rocky canyon, all of the lands of the reservoir site being owned by Mr. Henshaw. The canyon extends below for some three miles and is partly in public ownership but a few homesteaders are located in this stretch. Then follows the San Dieguito Ranch, an original Spanish grant in one ownership, with perhaps 3,000 acres strictly riparian, of which 1,000 is arable bottom land. About 4 years ago the Santa Fe Railroad Company, present owners of the San Dieguito Ranch contracted with the South Coast Land Company to permit the pumping of not to exceed 50 Miners Inches to the town of Del Mar. Beyond the west boundary of the San Dieguito Ranch the tide flats begin and there is no important complication between there and the ocean, the ground requiring drainage rather than anything else.

The construction of the Carroll Dam will undoubtedly cut off a large part of the water supply of the San Dieguito Ranch and the requirements below Carroll have been estimated as amounting

to 1,350 acre feet per year by Harroun and 1,000 acre feet by Lippincott. I think both of these estimates are low and the requirement of the Ranch to date easily reach 2,500 acre feet under the present conditions. I have neglected to mention that the San Dieguito Ranch had upon it an old ditch with a capacity of about 300 Miners Inches and a diversion and use of some kind has been made of flood waters from April to June as a rule every year. The immediate use from this Ditch would probably not amount to over 500 acre feet. The remainder of the use would be due to pumping plants in the gravels. No settlement has been made with the San Dieguito Ranch.

SANTA MARIA CREEK

Santa Maria Creek being a branch of the Santa Ysabel has really been covered in the foregoing. It enters the San Pasqual Valley and may be considered to affect only the west half of the Valley and one ranch on Santa Maria Creek alone. The proposed reservoir having no other riparian ranches below it, does not involve any other questions than are already involved in the San Pasqual Valley except where it was stated that 190 square miles of drainage area were tributary to the San Pasqual Valley below the Pamo Dam, the irrigation of the Santa Maria Dam and reduce this by 60 square miles leaving only 130 square miles tributary to this valley below the reservoirs and to that extent would modify conclusions previously made.

Extra Copy.

Bernardo, Cal. Dec. 9, 1911.

Mr. Wm. G. Henshaw,
Mills Building,
San Francisco, Cal.

Dear sir;

I was in Los Angeles Dec. 5th to cast my vote and was asked by C. R. Oldberg of the Indian Irrigation Service to call at his office. He handed me the enclosed letter and discussed the water question very fully.

He said that he could accompany Mr. Keller and myself on an auto trip between December 18th and 20th and that I could soon notify Mr. Keller. He said frankly that he was not clear who he was dealing with, that the South Coast Land Co. was mentioned, Mr. Keller, P. L. and P. Co., a lawyer named McElroy and Oscar Lawler, that he knew me and understood ~~exactly~~ generally the proposed water development and that he knew exactly what the requirements of the Rincon Reserve were and showed me his report and plans for a pumping plant to irrigate it. He is now asking for bids on this plant and has made a demand on the Escondido ditch for 75 Miner's inches to operate it or intends to do so.

He proceeded to indicate that the following points would make the basis of an agreement which he would recommend.

(a) that you would furnish 75 to 100 Miner's inches off the Escondido ditch on to the Rincon Reservation. This secures him in a fall of nine-hundred feet 90 effective H.P. With this he will pump from the gravels the remaining water required.

(b) or, that you furnish the equivalent in power viz;

ninetyeffective H.P. during the pumping season. In thatcase the Irrigation Service considers the gravels sufficient to supply the total amount the reservation needs, which he states to be 267 Miners inches.

(c) He would like to have the right of way for pipe lines in sec 36 adjoining the Rincon on the east. This belongs I think to P.L. & P. Co. or used to five years ago. There is a narrow strip of arrable land on the west edge of sec. 36 which is irrigable from this proposed pipe line. It is not now in use and it would appear to be a very good stroke of business to turn this in in an agreement as it will particularly please the Indian Superintendent.

(d) Mr Goldberg barely mentioned the question of extremely dry years. He said that it was his duty to safeguard the Indian's rights and I gained the impression that with the above concessions that he would not ask for any guarantee of water turned out of the reservoir in extremely dry years.

(e) Code a former chief of the service has resigned and a Mr. Granville is acting chief in Washington. Mr Oldberg says that he himself will probably make the final recommendations which will be adopted. I believe that as these officers are liable to transfer it will be wise to perfect this agreement at an early date.

Very sincerely yours,

October 12, 1914.

Mr. Ed Fletcher,
Manager.

Dear Sir:-

I wish to again draw your attention to the power plant now being designed and possibly built by the Escondido Mutual Water Company on the San Luis Rey River. This plant you remember was the subject of a contract with the Indian Service at the Rincon Reservation which is in Mr. Henshaw's hands. My point is this that by allowing them to proceed and utilize 2,000 miners inches of water on the lower river and provided that utilization is complete before Mr. Henshaw's diversion through the Lusardi Tunnel, that the water rights on the San Luis Rey will be seriously damaged and these people will be entitled to 2,000 miners inches delivered to their head gate for power purposes and you would have no way of getting around it.

Now my opinion is that you should hasten to make this application to the State Water Commission under the law approved January 2, 1912. In the proceeding following this application which, if you present it, will be the prior application, it will be necessary to state who, if any, will be affected by a decision granting you rights and at that time the Escondido Company would have to be represented if they care to make a claim, but in any case, they could only claim by making an application to the Water Commission and receive notice which you do not want.

My first suggestion was that you should protest to the State Water Commission on the ground that they have not taken out an application for power nor about to use water, but the first effect of such a protest on your part would be simply to force them to make an application and therefore become a prior power user on the River which is exactly what you do not want. I therefore again urge an immediate filing of an application for a water power permit, the proceedings being the same as that which I have already put through for you on Boulder Creek.

Very sincerely yours,

WSP-BK

ED FLETCHER CO.
REAL ESTATE INVESTMENTS
1548 D STREET



AGENTS
SOUTH COAST LAND CO.
F. & W. THUM CO. BLDG.
GROSSMONT PARK CO.
PINE HILLS ASSN.
JAMES A. MURRAY

SAN DIEGO, CALIFORNIA, Sept 15, 1911

Mr. W. S. Post,
Mesa Grande, Calif.

Dear Post:

The telephone people say that all the material has been sent up to Santa Ysabel and for you to botify us a day or two ahead of time when you are ready to have the lineman come and string the wire.

Very truly yours

Ed Fletcher

EF.L

Not reviewed
after dictation.

ans. notify telephone Friday Sept 22



WM. MULHOLLAND
CHIEF ENGINEER
J. B. LIPPINCOTT
ASS'T CHIEF ENGINEER

FORM 1-1
CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF THE
LOS ANGELES AQUEDUCT
ENGINEERING DEPARTMENT
CENTRAL BUILDING

LOS ANGELES, CAL.

Aug. 16, 1911.

*Mr. W. S. Post.
Mesa Grande, Cal.*

Dear Mr. Post:-

Your letter of the twelfth reached me this morning and will not go ahead with the work until Mr. Ellis arrives which will be the first of next week, but as yet I have not heard from him. Mr. Keller was in this morning and was anxious to get the land that is government within the Forest Reserve, the property maps you left here show ownership but if I remember correctly I understood you to say all the land marked U. S. Nat. Forest was not correct. If you have a list of government land the line passes through would like to have it, otherwise I can get same from land office records here.

*I have not attempted to go ahead and think when we have additional data so the line will be complete it can be done to greater advantage for completing necessary maps and records.
Trusting to see you on your arrival here I am
Very sincerely yours
W. S. Mulholland*



WM. MULHOLLAND
CHIEF ENGINEER
J. B. LIPPINCOTT
ASST. CHIEF ENGINEER

FORM 1-1
CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF THE
LOS ANGELES AQUEDUCT
ENGINEERING DEPARTMENT
CENTRAL BUILDING

IN REPLY PLEASE REFER
TO THESE INITIALS.

LOS ANGELES, CAL. July 13, 1911.

Mr. Wm. Post,
Del Mar, Cal.

Dear Post:

Mr. Henry Keller has requested me to act in a consulting capacity relative to the application for right-of-way in Forest Reserves or other public land for his canal, for which you are making field surveys. The arrangement that we have is, that you are to do the field work necessary for the preparation of these maps, that he is to select a draftsman who shall work in our office under my direction on the final preparation of the maps, that he is to pay the salary of the draftsman. It may be possible that you have already prepared these maps; in either event, he wishes me to review this work.

I hope that this may be agreeable to you, but if it is desirable to modify this in any particular, I have no doubt that we can make a satisfactory arrangement.

The essential feature of the application is that the line shall be actually surveyed and that it shall be tied directly into all existing official corners along the route and that the termini of the line shall be tied to official corners. If it is understood that this work is to be done in as careful and thorough a manner as you would do in case you were obtaining a right-of-way over privately held land, far less trouble would be experienced than if it were considered a mere formality.

You understand, I presume, that the Government takes these maps and notes and checks them up by careful computation in the Washington office. It is almost impossible to fully comply with all their requirements on the first trial, because ideas seem to be constantly changing in Washington as to just what they want, but careful conscientious work, both in the field and in

#2 - Wm. Post - 7-13-11

the office, is fundamental. There should also be a general outline of the entire scheme, showing the reservoir sites, power sites, and, approximately, all lands to be irrigated. They will want sections of the dams and canals and the general system of the available water supply. I will ask you to take one of the small scale maps of the entire San Diego region outline, the location of your reservoir sites and power plants, and in a general way the land to be irrigated, these to accompany the right-of-way application.

There is some question as to whether this application can be made under the Act of 1891, for irrigation purposes, or under a later Act for power purposes. In order to get started correctly on this application, I will ask you to promptly send me this general outline map in order that we may take up with the Department the question as to whether they will accept an application under the Act of 1891. The Act of 1891 grants an absolute easement over public lands, whereas, the later power Acts are for a permit which is subject to revocation by the Secretary of the Interior.

I am sending you the last "Use Book" of the Forest Service relative to application for right-of-way on Forest Service. When I get the general sketch map above referred to, I will take up with Mr. Keller the question as to the statute under which he makes application.

Very truly yours,

J. B. Lippincott

WILLIAM S. POST
CIVIL ENGINEER
ASSOC. MEM. AM. SOC. C. E.
1218 UNION TRUST BUILDING
LOS ANGELES, CAL.

701 TIMKEN BUILDING
SAN DIEGO, CALIFORNIA.

Dear Mr.
My. Hulburt:

I have arranged for a platting of the Pamo conduit field notes by Mr. Baith here at San Diego, largely ^{as} ~~on~~ account ^{of} ~~of~~ Mr. Alouson's ~~feelings~~ ^{wife} who is ~~has~~ ^{to} sign the affidavit.

The work will be platted ~~in~~ on detail paper + inked, + ~~a full~~ ^{amendment +} ready for tracing in your office, + ~~full~~ with a complete set of original field notes.

Ellis the ~~other~~ draughtsman I am not in touch with yet, but expect to be able to carry out the arrangement in a week as proposed.



WM. MULHOLLAND
CHIEF ENGINEER
J. B. LIPPINCOTT
ASS'T CHIEF ENGINEER

FORM 1-1
CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF THE
LOS ANGELES AQUEDUCT
ENGINEERING DEPARTMENT
CENTRAL BUILDING

LOS ANGELES, CAL. Aug 5th 1911.

Mr. W. S. Post.

Mesa Grande, Cal.

Dear Mr. Post:—

Yours of the third reached me this morning and the arrangement you have made to have notes and maps of the Pamo conduit put in shape in San Diego is most satisfactory and think will facilitate greatly in the preparation of the maps and notes in this office for filing.

Sincerely yours

W. W. Hulburt

Aug 12
ans. Ellis to go up 20th
also mentioned 400' - 1" Lake Helen.

WILLIAM S. POST
CIVIL ENGINEER
ASSOC. MEM. AM. SOC. C. E.
1818 UNION TRUST BUILDING
LOS ANGELES, CAL.

(Mesa Grande)
701 TINKER BUILDING
SAN DIEGO, CALIFORNIA

Aug 2 - 1911.

Mr. H. W. Keller,
Los Angeles

Dear Sir:

I took with Mr. Kippinett
on Monday ~~the~~ Tuesday the right of
way matter. It was agreed to
prepare a letter to the Department to
which will be submitted to you, asking
for ~~that~~ to determine procedure.

The right of way maps in the
mean time will be started, traverses
computed in Mr. Kippinett's office
& from Warner's to and including
Paine Reservoir.

The ^{notes of the} remainder Paine Canal, Paine
Reservoir to Surr reservoir were still
in Mr. Alouson's hands & I have
to-day arranged for my draughtsman
to reduce these ~~the~~ notes here in

convenient farm for Mr. Huppincott's
chief draughtsman. The upper portion of the line
~~can be~~ will be signed by myself and
the ~~Pano~~ ^{condy} by Alousoo, & of course
he will be

On Wednesday I
did the lower by Mr. Alousoo & as
a matter of form I will give
him a sight of the map as it
is made up

I also saw Mr. Hawgood &
furnished him with such data
as is compiled in the Pano Daw
Site

copy.



Mesa Grande, Cal., July 21 1911.

Mr. J. B. Lippincott,
Los Angeles

My dear Lippincott:

Your letter regarding
right-of-way Warner's Canal
has just reached me, and
I am forwarding a tracing of
the alignment on the filing
scale. $2000' = 1''$.

The field notes will follow
tomorrow, and I will also include
some of the data asked for in your
letter. I will be glad to help

in putting this in shape, and
am only hampered for the moment
by being separated from my data
at San Diego.

Very Sincerely Yours

William S. Fort

[Faint, mostly illegible handwritten text, possibly bleed-through from the reverse side of the page.]

why we could not have all the water of the San Luis Rey river during the summer months providing we would furnish enough electricity to run a pumping plant for the Rincon Reservation. I even went so far as to suggest that if it was not practical to furnish electricity, we might furnish the distillate for a gasoline engine, having in mind that it might hurt your future sale of electricity if there was a reservation such as mentioned above.

Mr. Granville arrives in Los Angeles Sunday, having stopped off a day in Flagstaff. He has accepted my invitation for himself and family to spend next Sunday in Del Mar and San Diego as my guest.

I feel you should have this information before you go east. If the Government insists before taking action on your petition in referring it to the Los Angeles office, I feel sure that you need have no fear but what a satisfactory compromise can be made with Mr Granville as I am more than ever convinced that he will be with us on any legitimate proposition.

When are you coming down this way? I hope to see you before you go east. I will write you another letter later on pertaining to the success of my trip in the matter of riparian rights.

Very truly yours,

E. F.

P. S.

n I did not send a copy of this letter to Mr. Lawlor but do think this information may be of advantage to him. The above letter is simply a suggestion which I thought might be of interest to you and hope same meets with your approval.

Present Expenditures
Volcan Land and Water Company
May 20, 1915.

Warner Dam

Concreting Outlet Tunnel

2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	<u>18.00</u>	\$ 35.70

Cook House

Cook		<u>2.25</u>
------	--	-------------

Total daily at Warner's		\$ 37.95
-------------------------	--	----------

Pamo Dam

1 man at	\$ 2.50	
1 man at	<u>2.25</u>	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.03	
Material	<u>2.50</u>	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
6 Head Mules at 1.50 (including feed)	9.00	
material	<u>4.00</u>	\$ 33.50

Resume

Warner Dam	\$ 37.95
Pamo Dam	4.75
Carroll Dam	10.78
Sutherland Dam	<u>32.50</u>
	\$ 86.98
	=====

Expenditures Volcan Land & Water Co.

through office of W. S. Post,

March 1915

Water Measurements	\$ 257.91
Warner Dam	539.77
Pamo Dam	75.00
Carroll Dam	197.54
Engineering	346.11
Office	129.53
Compensation Insurance	<u>144.01</u>
	\$ 1,689.47
	=====

Present Expenditures
Volcan Land and Water Company
May 20, 1915.

Warner Dam

Concreting Outlet Tunnel		
2 men at 3.00	\$ 6.00	
3 men at 2.50	7.50	
1 Foreman (including board)	4.20	
Material (average daily)	<u>18.00</u>	\$ 35.70
Cook House		
Cook		<u>2.25</u>
Total daily at Warner's		\$ 37.95

Pamo Dam

1 man at	\$ 2.50	
1 man at	<u>2.25</u>	\$ 4.75

Carroll Dam

1 man at	\$ 2.50	
1 man at	1.75	
1 Foreman at	4.03	
Material	<u>2.50</u>	\$ 10.78

Sutherland Dam

3 men at \$2.50	\$ 7.50	
1 man at 2.75	2.75	
3 men at 2.25	6.75	
1 Foreman at 3.50	3.50	
6 Head Mules at 1.50 (including feed)	9.00	
material	<u>4.00</u>	\$ 33.50

Resume

Warner Dam	\$ 37.95
Pamo Dam	4.75
Carroll Dam	10.78
Sutherland Dam	<u>33.50</u>
	\$ 86.98
	=====

Expenditures Volcan Land & Water Co.through office of W. S. Post,March 1915

Water Measurements	\$ 257.91
Warner Dam	539.77
Pamo Dam	75.00
Carroll Dam	197.34
Engineering	346.11
Office	129.33
Compensation Insurance	<u>144.01</u>
	\$ 1,689.47

Some 20 pumping plants are scattered through the valley, some used in connection with these ditches and some independent. The total use is very difficult to estimate but may be 500 M.I. capacity of pumps and an annual pumping of 2,000 acre feet.

EAST SAN PASQUAL

A settlement of the relations of the Pamo Water Company and the East San Pasqual water users was made in 1889. The following is a complete copy of this instrument and attached thereto is a map showing who the owners of record are, and the date of the signing of the instrument, and what land was covered.

John B. Judson, et al

In consideration of the benefits to accrue from the building of the works of the Pamo Water Company upon the Bernardo or Isabel River in the County of San Diego, State of California, and of One Dollar (\$1.00) to us paid, we hereby grant individually and collectively unto said company, a Corporation existing under the laws of California, and doing business at San Diego, California, all our rights of every description, both joint and several, either as riparian owners, or appropriators, or grantees of appropriators in and to the waters of the said stream or appertaining to the following described lands lying in the valley known as San Pasqual upon said River and in said County and State, to-wit: All lands owned by us in Sections 35 and 36, Tp. 12 South, Range 1 East, S. B. M.

This grant is to include all our rights under an appropriation of thirteen hundred and fifty (1350) miners inches of water, measured under a four (4) inch pressure, made under the laws of California in the year 1876, by John Judson, A. F. Brown, W. B. Stewart, John Clevinger, and Archibald Clevinger, and is to operate as a perpetual right to impound, divert and carry away the waters of said stream, at point on said stream within two miles of the lower end of Pamo Valley on said stream. And the said Company is hereby constituted the sole and perpetual $\frac{1}{2}$ of ourselves and of the land above described and of its future owners, tenants, or possessors, to impound and divert the same, and all damages therefor are hereby expressly waived and released. And said grant and said agency shall be and run with the land in the nature of a covenant forever.

And in further consideration of the premises, we grant unto the said Company a strip of land fifty (50) feet wide, for a perpetual right of way, with right of ingress and egress across said land or any of our lands adjoining the same, upon such line as it may hereafter locate the same. Said right of way to be for the aqueduct of said Company and ingress and egress to be for building, maintenance and repairs.

By its acceptance hereof, said Company binds itself to allow the occupants or owners of said lands to take and use on and after January the first, and until June fifteenth of each year after the aqueduct is constructed and in operation, a sufficient amount of water to irrigate the lands heretofore irrigated by the several parties signing this instrument, or their assigns, from such points on its aqueduct above said lands, and in such quantities as they may select, but with connections to be made under the direction of said Company's Chief Engineer, and on and after the fifteenth day of June, and until January first of each and every year, ten (10) miners inches of water measured under a four inch pressure, above center of gravity, for use upon said lands, and taken from such points on its aqueduct above said lands, and in such quantities within the hereinafter mentioned limits as the said owners and occupants or their assigns may select. Said water to be the equivalent of ten (10) miners inches steady flow from June fifteenth to January first of each and every year, but is not to be taken in quantities of less than one inch or more than two hundred inches at once, unless convenient for said Company.

All of the grants, covenants, obligations, rights,

liabilities, etc., herein specified, are to be binding upon and enure to the benefit of the heirs, representatives, grantees and lessees of the grantors, and the successors, and assigns of said Corporation forever.

Upon failure to commence work within ninety days and to prosecute the same in good faith and with due diligence, the rights herein granted are to revert to the grantors until the works are completed, the rights of the grantors are to remain as they now are.

In Witness Whereof, we have hereunto set our hands and seal this 18th day of Sept., 1889.

JOHN B. JUDSON
HENRY JOHNSON
JEUS OESON
A. M. STRIPLIN
A. D. TRUSSELL

Recorded in Book of Deeds 155, page 106.

This instrument brings up several questions. Is it now valid and would it be valid in case the Company did not construct the Pamo Conduit but placed it somewhere else as for instance through the Ramona Valley? If this instrument is valid, the obligation would seem to be the furnishing of an amount of water as now taken by the East San Pasqual Ditch. As above stated is about 12 acre feet until June 15th after which 10 Miners Inches or 12 acre feet per month is stated to be the limit of the Company's obligation to serve.

HARRIS OR LATTA DITCH

William C. Latta as shown on the map granted to the Pamo Water Company all of his rights as riparian owner and appropriator of the waters of the Santa Ysabel River on October 25, 1882 as recorded in Book of Deeds 155, page 255. In spite of this deed the successors of Latta have put to beneficial use about 50 Miners Inches of flood water.

WEST SAN PASQUAL DITCH

There have been several law suits between the West San Pasqual and the East San Pasqual water users and other parties; the most important one was entitled Huffner vs Judson; the plaintiff representing West San Pasqual and the defendant those living in East San Pasqual. Judgment was rendered in the Superior Court (Judge Torrence) of San Diego, April 15th, 1898 as follows:

That the east San Pasqual shall have the full flow of the river at the head of the East San Pasqual ditch from Aug. 15th to January 15th of each year and from January 15th to Aug. 15th the two parties shall alternate in the use of the water. The

plaintiffs or West San Pasqual having the full flow the first twenty days and the defendants the last ten days of each month. Henry Johnson one of the defendants, shall have the use of the water one day in each month.

In accordance with the above decision the water is distributed as follows:

For the West San Pasqual water users.

H G Myers	for right of way in Secs. 33 & 34	30 acres
Wm Dyer	for land in SE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec 33	5 "
Winthrop Dyer	" " " NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 33	5 "
F H Roberts	" " " W $\frac{1}{2}$ Sec 33	60 "
" "	" " " E $\frac{1}{2}$ Sec 32	20 "
Mrs J H Lewes	" " " NE $\frac{1}{4}$ Sec 32	20 "
Nelson Olds	" " " " Sec 30	40 "
Mrs Smith	" " " NE $\frac{1}{4}$ Sec 32	6 "
M Mantiel	" " " E $\frac{1}{2}$ of NW $\frac{1}{4}$ Sec 32	9 "
Huffner	" " " SW $\frac{1}{4}$ Sec 32	50 "
S F Wood	" " " NW $\frac{1}{4}$ Sec 32	80 "
Henry Pratt	" " " S $\frac{1}{2}$ of NE $\frac{1}{4}$ Sec 31	20 "
Norman Hall	" " " S $\frac{1}{2}$ of Sec 32	30 "
E Ward	" " " S $\frac{1}{2}$ Secs 32 & Sec 4 & 5, T 13 S, R 1 W,	75 "
William Little	" " " NE $\frac{1}{4}$ of NW $\frac{1}{4}$ Sec 32	1 $\frac{1}{2}$ "
		451 $\frac{1}{2}$ "

Of the above list Mr. Henshaw has acquired the ownership of the Roberts tract which carries with it 80 acres of this ditch right.

PUMPING PLANTS

No statistics of the pumping plants have been kept by the Company and no information can be furnished by me except that the acreage in use is gradually increasing. Pumping plants as a rule lifting the water from the gravels and applying them on the surface receive their own return waters. We have for this reason maintained for 3 years various stations to observe the level of the water plane in the gravels. The object of these measurements would be to estab-

lish the real measure of damage caused by diversion up stream in the reduction of the water plane if it really does occur.

SAN BERNARDO RANCHO

This original Spanish grant lying across the river has about 6,000 acres originally riparian. There has been, however, a partition and the riparian acreage may be considerably less. The various ownerships of this Ranch are in litigation and it is impossible at the moment to give any further detail regarding this, but it will be supplied later. The back water of the Carroll Reservoir nearly separates the Ranch and therefore it is difficult to say that they can suffer from a reduction of supply of water flowing past the Ranch.

PRIORITIES BELOW CARROLL RESERVOIR

The Carroll Reservoir itself is in a rocky canyon, all of the lands of the reservoir site being owned by Mr. Henshaw. The canyon extends below for some three miles and is partly in public ownership but a few homesteaders are located in this stretch. Then follows the San Dieguito Ranch, an original Spanish grant in one ownership, with perhaps 3,000 acres strictly riparian, of which 1,000 is arable bottom land. About 4 years ago the Santa Fe Railroad Company, present owners of the San Dieguito Ranch contracted with the South Coast Land Company to permit the pumping of not to exceed 50 Miners Inches to the town of Del Mar. Beyond the west boundary of the San Dieguito Ranch the tide flats begin and there is no important complication between there and the ocean, the ground requiring drainage rather than anything else.

The construction of the Carroll Dam will undoubtedly cut off a large part of the water supply of the San Dieguito Ranch and the requirements below Carroll have been estimated as amounting

to 1,330 acre feet per year by Harroun and 1,000 acre feet by Lippincott. I think both of these estimates are low and the requirement of the Ranch to date easily reach 2,500 acre feet under the present conditions. I have neglected to mention that the San Dieguito Ranch had upon it an old ditch with a capacity of about 300 Miners Inches and a diversion and use of some kind has been made of flood waters from April to June as a rule every year. The immediate use from this Ditch would probably not amount to over 500 acre feet. The remainder of the use would be due to pumping plants in the gravels. No settlement has been made with the San Dieguito Ranch.

SANTA MARIA CREEK

Santa Maria Creek being a branch of the Santa Ysabel has really been covered in the foregoing. It enters the San Pasqual Valley and may be considered to affect only the west half of the Valley and one ranch on Santa Maria Creek alone. The proposed reservoir having no other riparian ranches below it, does not involve any other questions than are already involved in the San Pasqual Valley except where it was stated that 190 square miles of drainage area were tributary to the San Pasqual Valley below the Pamo Dam, the irrigation of the Santa Maria Dam and reduce this by 60 square miles leaving only 130 square miles tributary to this valley below the reservoirs and to that extent would modify conclusions previously made.

June 17, 1915.

Mr. John M. Eshelman,
1115 Glendora Ave.,
Oakland, Cal.

Dear Sir:

I enclose herewith a map which may be of some assistance in locating ditches etc. referred in the Volcan papers.

Very sincerely yours,

I shall be in San Francisco June 24 to 26 at the Exposition. I will telephone you on arrival, and learn if you wish me to call on you relative to any of these matters. I shall be glad to do so, if you desire it.

ESTIMATED COST OF WARNERS DAM

Height 95 feet; Top Elevation 2715 feet; Depth of water 90 feet.

October 8, 1914.

- 000 -

Excavation.
 10350 cu.yds. at 70¢ ----- \$ 7,245.00
 51800 cu.yds. at 25¢ ----- 12,950.00 \$ 20,195.00

Pumping ----- 5,000.00
 Embankment - 336569 cu. yds at 30¢ ----- 100,971.00
 Facing of Concrete Slabs - 20700 sq.yds. at \$1.50 - 31,050.00
 Cut-off Wall ----- 30,000.00
 Concrete Gutter - 600 lin. ft. at \$1.00 ----- 600.00
 6" Drain Tile - 2700 lin. ft. at 15¢ ----- 405.00
 Outlet Tunnel - 1020 lin. ft. at \$18.00 ----- 18,360.00
 Outlet Basin, Wier, etc., ----- 3,000.00
 Outlet Tower ----- 15,000.00
 Footbridge to Tower ----- 1,000.00
 Spillway on south side - 200' wide
 482 cu.yds.concrete at \$8.00 ----- \$ 3,856.00
 225 cu.yds.excavation at 50¢ ----- 112.00
 Flashboard Arrangements ----- 500.00 4,468.00
 Spillway on north side - 100' wide
 48330 cu.yds.excavation at 30¢ -- 14,500.00
 3" Concrete Lining - 5900 sq.
 yds. at \$1.00 ----- 5,900.00
 Flashboards and foundations ----- 1,000.00 21,400.00
 Buildings ----- 6,000.00
 Water Supply to Buildings ----- 1,000.00
 Equipment, Tools ----- 4,000.00
 Improvement of Grounds, Fencing, etc., ----- 2,000.00

Total cost without overhead ----- \$264,449.00

Deduct Expenditures to September 1st, 1914:

Cut-off Wall ----- \$30,000.00
 Outlet Tunnel ----- 9,050.00
 Buildings ----- 6,000.00
 Water Supply to Buildings ----- 1,000.00
 Equipment, Tools ----- 4,000.00
 Improvement of Grounds ----- 2,000.00 52,050.00

\$212,399.00

Add 25% for engineering and contingencies ----- 53,100.00

\$265,499.00

Interest during construction:
 8% for 4 months (½ period) ----- 7,080.00

Total cost to complete ----- \$272,579.00

ESTIMATED COST OF WARNERS DAM

Height 95 feet; Top Elevation 2715 feet; Depth of water 90 feet.

October 8, 1914.

- 000 -

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 10350 cu.yds. at 70¢ ----- \$ 7,245.00
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 Outlet Tower ----- 15,000.00
 Footbridge to Tower ----- 1,000.00
 Spillway on south side - 200' wide
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 225 cu.yds.excavation at 50¢ ----- 112.00
 Flashboard Arrangements ----- 500.00 4,468.00
 Spillway on north side - 100' wide
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 3" Concrete Lining - 5900 sq.
 yds. at \$1.00 ----- 5,900.00
 Flashboards and foundations ----- 1,000.00 21,400.00
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Facing of Concrete Slabs - 20700 sq.yds. at \$1.50	-----	31,050.00
Cut-off Wall -----		30,000.00
Concrete Gutter - 600 lin. ft. at \$1.00	-----	600.00
6" Drain Tile - 2700 lin. ft. at 15¢	-----	405.00
Outlet Tunnel - 1020 lin. ft. at \$18.00	-----	18,360.00
Outlet Basin, Wier, etc., -----		5,000.00
Outlet Tower -----		15,000.00
Footbridge to Tower -----		1,000.00
Spillway on south side - 200' wide		
482 cu.yds.concrete at \$8.00	---- \$ 3,856.00	
225 cu.yds.excavation at 50¢	---- 112.00	
Flashboard Arrangements -----	500.00	4,468.00
Spillway on north side - 100' wide		
48330 cu.yds.excavation at 30¢	-- 14,500.00	
3" Concrete Lining - 5900 sq.		
yds. at \$1.00 -----	5,900.00	
Flashboards and foundations -----	1,000.00	21,400.00
Buildings -----		5,000.00
Water Supply to Buildings -----		1,000.00
Equipment, Tools -----		4,000.00
Improvement of Grounds, Fencing, etc., -----		2,000.00
Total cost without overhead -----		\$264,449.00

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Outlet Tunnel - 1020 lin. ft. at \$18.00	-----	18,360.00
Outlet Basin, Wier, etc., -----		3,000.00
Outlet Tower -----		15,000.00
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yds. at \$1.00 -----	5,900.00	
Flashboards and foundations -----	1,000.00	21,400.00
Buildings -----		6,000.00
Water Supply to Buildings -----		1,000.00
Equipment, Tools -----		4,000.00
Improvement of Grounds, Fencing, etc., -----		2,000.00
Total cost without overhead -----		\$264,449.00

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Buildings -----	6,000.00	
Water Supply to Buildings -----	1,000.00	
Equipment, Tools -----	4,000.00	
Improvement of Grounds -----	2,000.00	52,050.00

\$212,399.00

Add 25% for engineering and contingencies ----- 53,100.00

\$265,499.00

Interest during construction:

 8% for 4 months (1/2 period) ----- 7,080.00

Total cost to complete ----- \$272,579.00

V L.W. Co.
NOTICE OF APPROPRIATION

NOTICE IS HEREBY GIVEN THAT the undersigned Volcan Land and Water Company claims and appropriates all the water flowing or hereafter to flow in the channel of the San Luis Rey River in the County of San Diego, State of California, at the point at which this notice is posted being upon the Rancho Valle de San Jose 500 feet east of where said river crosses the west boundary of said Rancho together with the water from all the creeks or affluents of said river to the extent of Fifty thousand inches measured under a four inch pressure of the continuous flow of said stream.

The purposes for which said Volcan Land and Water Company appropriates and claims said water are: for the irrigation of private lands and lands owned by individuals and corporations in the said County of San Diego, State of California, and for horticultural and agricultural purposes on said lands and for the purpose or producing and developing power to be used in generating electricity and operating machinery for the generating of electricity and making of compressed air and for all other and lawful uses and purposes.

The places of intended use of said water are on the following described lands situated in the county of San Diego, State of California, to-wit:

On the Bernardo Rancho, on Sections 24, 25, 26 and 36 Township 13 South, Range 2 West, San Bernardino Meridian; on lands included in the Linda Vista Irrigation District, on the Ranchos Rincon del Diablo, Valcitas de San Marcos, Encinitas, and San Dieguito; on lands in fractional townships as follows:
Township 12 South, Range 4 West, Township 13 South, Range 4 West, Township 12 South, Range 3 West, Township 14 South, Range 4 West, Township 14 South, Range 3 West, and Township 14 South, Range 2 West.

The means by which said Volcan Land and Water Company intends to divert the said water is by the constructing of a solid dam across the channel of said river at the point where this notice is posted as aforesaid, 120 feet in height more or less, in order to divert sufficient waters of said stream to make up with the flow of said stream and said continuous flow of Fifty thousand inches of water so measured as aforesaid, also by means of a flume, ditch, cement aqueduct, tunnels and pipes, leading from said dam the same to be twelve feet in width by eight feet in height upon a grade of 10 feet per mile or in the case of a circular conduit the same to be 9 feet in diameter on a grade of 25 feet per mile; the same to be of sufficient size to carry the requisite amount of water at each respective point and diminishing as the supply is utilized along the line of said conduit.

That the place of intended diversion of said water is the place where said dam is to be constructed as aforesaid, and where this notice is posted as hereinbefore stated and that a part of the route of intended conveyance of said water so claimed by the undersigned is within the Cleveland National Forest and within Sections 4, 5, 6, 7, 9 and 10 Township 11 South, Range 2 East, San Bernardino Meridian, and within Sections 31 and 32, Township 10 South, Range 2 East, and within Sections 12, 13, 23, 24, 26 and 35, Township 11 South, Range 1 East, in said County of San Diego.

IN WITNESS WHEREOF, the said Volcan Land and Water Company has caused its name to be subscribed hereto this 12th day of December 1912.

VOLCAN LAND AND WATER COMPANY,

BY [Signature]

APPROPRIATOR.

Endorsed not used

Dec 9th 1911

Mr. William G. Henshaw,

Mills Bldg.,

San Francisco, Calif

Dear Sir:

Confirming my g telegram of even date will say that on the California "Limited" from Chicago, I was able to scrape up an acquaintance with Mr. J. J. Granville, the newly appointed Chief Engineer of the irrigation affairs of the Indian Department in Mr/ Code's place. I did everything I could to entertain him and was finally able to get from him to read a copy of the report of Mr. Oldberg which had just been sent to Washington in the matter of the San Luis Rey proposition. This report vitally affects your interests. It is headed the head of the Rincon Reservation Water Supply". Mr. Oldberg has recommended and Mr. Code has approved of the demanding the summer flow of the San Luis Rey river which will be used for power purposes by dropping same from the Escondido ditch 856 feet.

I sent you some time ago a copy of the agreement between the Escondido Irrigation District and the Government which I feel Mr. Lawlor should see if he has not already gone into it. The summer flow of the San Luis Rey river is not enough water to irrigate the Indian reservation as they have 900 acres to irrigate and want at least three hundred inches, according to Mr. Oldberg. This I think is an abnormal amount, but the minimum amount of power Mr. Oldberg

has figured 18 125 horse power that will be generated from the San Luis Rey River. This amount of power, the report says, will be enough to pump the 300 inches of water for the Indians. The report of Mr. Oldberg and Mr. Code both make particular mention of the power to be generated by you from water brought from the Warner's ranch.

The date of the report is Oct. 16th 1911. As I told you some time ago, Mr. Post informed me that it is his impression that both Code and Oldberg had some feeling that they were being buffaloed when they were informed that there was no intention on the part of your company to develop power for they knew otherwise and I think myself that you should have said that the power was purely incidental and if there was any power, we were so much ahead.

I write this not as a criticism but as a possible suggestion in your future dealings with the Department of Indian Affairs. I feel sure you will need the friendly influence of the Indian office in Los Angeles before you get through with this proposition for they were the prime factor in the contract between the Government and the Escondido people as you can see by reading said contract.

I acted on impulse owing to the friendly attitude of Mr. Granville toward me and I discussed the matter to some extent although I made no admission to him of any power only along the following lines:

Mr. Granville said, "You see Oldberg refers to some power you people are going to develop". My answer was, that if "there is any power it is purely incidental. I got him to admit unofficially that if there was any power developed by you that he could see no reason

May 31, 1915.

Mr. Post:

Eshleman wants you to have forwarded to him at his Oakland address, 1115 Glendora Ave., the following information:

1. At the rate that we are now building, how long would it take to complete the Warners and Carroll Dams?
2. What is your opinion as to what should be done at Pamo and Sutherland?

Please attend to this immediately.

Ed Fletcher.

F-8

Papers Requested by Mr. Eschelmann.

1. Copies notice of appropriation at all points of diversion, with date of filing and recordation. *ready.*
 2. Copies of contract with Escondido Water Co., together with all correspondence with Departments of the Federal Government with relation to rights of way across Indian Reservation. *Contract ready.*
 3. Copies of report of Lippincott, O'Shaughnessy and Harroun on Volcan system. *H.*
 4. General outline of system, with historical and other data, so as to give general understanding, without detail, of the system. *ready.*
 5. Warners Ranch Dam: Capacity; cost of dam; date of beginning of work; amount expended to date; number of men now employed and in what capacity; also give note as to continuity of employment and fluctuation in number of men, with reasons therefor. *ready.*
- Similar information for other damsites, conduits, and other portions of the system. *ready.*
6. Additional information, showing relationship between the amount of water that can be impounded in various damsites, at proposed heights, to total flow of river at said points. *ready.*
- Likewise, relationship of quantity of water, if any, originating in the catchment area of each dam in excess of the capacity of such dam to
- a. Adjudicated claims below the point of such damsite
 - b. Asserted claims.
7. Claims of every character, so far as known, on the streams involved adverse to the Volcan Co., with amounts, and such historical data as is available.
 8. Information on Sawday Tunnel case.
 9. Overhead expenses, (engineering, etc.)
 10. Copies of contract and information bearing upon the negotiation with the City of San Diego, showing length of time involved.

Papers furnished Mr. Eschelmann.

- Ans. (1) - Furnished complete copy of Exhibit "C" in "Offer of Sale to City" office. *No extra copy in Pg. # - 28.*
- Ans. (2) Escondido Papers = Assigned to Furnish Copy
- (a) Agreement E. M. W. Co. with Wm. G. Henshaw June 21 - 1912 *yes yes.*
 - (b) Agreement, US Indian Service + E. M. W. Co. *yes yes.*
 - (c) Mem. of conversation WSP. with C. R. Olberg. *yes yes.*
 - (d) Orig. Contract E. M. W. Co. + US - *Mackin,*
- Ans. (3.)
- (a) Harroun Report *yes yes.*
 - (b) O'Shaughnessy-Lippincott. *E.F.*
 - (c) Harwood - *E.F.*

3

Ans. (4) Historical & general Outline =
Assigned to Pot. & F.

Ans. (5) Complete Data & work story.

(a) Warner Dam.

(b) Warner Conduit

(c) Sutherland Dam.

(d) Ramona Conduit

(e) Black Canyon Feeder.

(f) Pamo Dam.

(g) Pamo Conduit.

(h) ~~R~~ Santa Maria Reservoir

(i) Santa Maria Feeder.

(j) Carroll Dam.

(k) Carroll-University Pipe Line

(l) San Clemente Dam.

No 2-(b)

P. 39-45

Agreement US Indian
Service - + RSM, W Co.

Apr 1-1911

No 2 (c)

Mem. of Conversation - on
Water Rights. C R Olberg.

No 2-(d)

US. Right of Way to Es,
M. W Co.

Ed Fletcher Papers

1870-1955

MSS.81

Box: 49 Folder: 1

**Business Records - Water Companies - Volcan
Land and Water Company - San Dieguito
System - Offer of Sale to City - Exhibits**



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