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1949

Papers Concerning Logan Water Works; Estimates, bids quotes

Dean F. Peterson *Utah State University*

Alvin A. Bishop *Utah State University*

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Bishop and Peterson Professional Engineers papers, 1948-1972. (COLL MSS 045) Utah State University. Special Collections and Archives Department.

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Price Each Gty. Glass June 29, 1949 1004# NOW 450 Bonds Ras 24" 11-1/40 Bonds 335 8 24" 22-1/20 1079 129.70 慈 24" 450 Nonda BhB 142.00 30" x 24" Reducer, S.E.E., Short 135.90 Pattern 30" x 24" 35F (Flange for steel OD) 1000 146.00 SA" X 6" BARRY Too 50" x 6" 56" x 5" 2070 24" BAS Blow-Off B Logan, Utah 129,15 hele Letting: 5:00 P.M. Gentlemen: Son diston except July 6, 1949

8/29/49

low bidder you will favor us with

In reply to your inquiry for bids to be received until 5:00 P.M., July 6, 1949, we are pleased to offer the following quotation for your acceptance within ten days after opening date of bids and subject to the conditions noted under the date line of this letterhead:

A.S.A. CLASS 100 BELL AND SPIGOT PIPE USING 18-40 METAL IN 12-PT. LENGTHS; SUPER-delayaud class 100 Bell and spigot pipe centripugal-LY CAST IN 18-PT. LENGTHS AS PER PEDERAL SPECIPICATION WW-P-421 TYPE ONE; A.W.W.A. CLASS B BELL AND SPIGOT PITTINGS. ALL MATERIAL TO BE TAR COATED.

5,900-ft. 36" Class 100 B&S Pipe, 12' lgths., having a metal thickness of .37" and a weight per foot of 351.7%. \$ 19.88/ft. 10,422-ft. 30" Class 100 B&S Pipe, 12' lgths., having a metal thickness of .79" and a weight per foot of 266.6%.

As an alternate to the 30" pipe:

Logan, Utah

Letting: July 6, 1949

10,422-ft. 24" Class 100 B&S Pipe, 18' 1gths., having a weight per foot of 168.6#. 9.56/ft.

Qty.	Clas	8			10	Wgt. Each	Price Each
1	В		x 24" R			6 Ja 1411#	\$ 177.80 °
7	В	36"	11-1/40	Bends	B&S	2100	264.60
9	В	36"	22-1/20	**	A series Was	2916	367.40
10	В	30"	11-1/40	11	Counce not	1540	194.0
7	В	30"	22-1/20			1528	192,

9.56/12.

ica Esch

177.80

367.60

Qty.	Class	Wena 20, 1949	gt. Each	Price Each
4	B 30"	450 Bends B&S	1684#	\$ 212.20
6		11-1/4º Bends B&S	1080	130.70
6	B 24"	22-1/20 " "	1072	129.70
4	B 24"		1181	142.90
1	B 30"			
		Pattern	1063	133.95
1	B 30"	x 24" S&F (Flange for steel OD)	1000	146.00
	B 24"		1324	186.70
v	B 30"	x 6" " "	1448	211.40
	B 36"	x 6" " "	2070	302.20
	B 24"	B&S Blow-Off Branches - No Man-		a va
Sant'	Short state of the	hole Lattiner Biog P.B	916	129.15
	B 30"	ditto, except with manhole	2152	313.80
	B 36"		2745	400.45

Prices quoted are f.o.b. cars our foundry with carload freight allowed to Logan, Utah, exclusive of unloading charges, sales and use tax, based on present published carload freight rate. Any variation in this rate at time of shipment to be for your account. This carload rate is based on a 60,000# minimum car.

Under present conditions we estimate we could start shipment of the 36" pipe within seven months, start shipment of the 30" pipe within four and one-half months and start shipment of the 24" pipe within three months. On shipment of the different diameters of pipe we would proceed with shipments at a rate to meet reasonable construction needs. This shipment, of course, is based on our receipt of the order and full information at shop, subject to prior sale of space and all conditions beyond our control.

Terms - Net cash thirty days from date of invoice.

B 35" x 24" Reducer B

B 35" 11-1/4" Benda

B 55" 22-1/20

B 50" 92-1/89

30" 11-1/40

10,482-ft, 84" Class 100 Bas Pipe, 18' lgths., having

17

We thank you for the opportunity of submitting our quotation and hope that in the event you are the low bidder you will favor us with an order.

Very truly yours,

J. Leslie Hart

Asst. Western Sales Manager

JIH tah

Sira Class

QUOTATION

HARDESTY DIVISION

ARMCO DRAINAGE & METAL PRODUCTS, INC.

SALT LAKE CITY BOISE CALDWELL TWIN FALLS JEROME ONTARIO 643 SO. 3RD WEST STREET, SALT LAKE CITY 10, UTAH P. O. BOX 926 TELE

643 SO. 3RD WEST STREET, SALT LAKE CITY 10, UTAH
P. O. BOX 9

Deuttt Spring to Devis Camp - Logan Canyon

Project Logan, Cache County, Utah

Bids Opening

ONTARIO NYSSA DENVER TELEPHONES 3-3873, 3-6257

Date 5:00 P. M.

Time Logan City offices

Place

o. Following Spiral Warrieto Steel Pipe & Fittings as per Specifications, furnished in 501			
lengths with Bevalded Endr			
5900° 36° 0. D. per ft.	113.0/	\$11.87	
104421 300 O. D. 9 9	93.5	8,82	
Alternate 10442; 24" O. D. pent.ft.	74.6	6,89	
1 - 36 to 30" Reducer each	400	111.32	
Alternate 1 - 36" to 24" Reducer such 1 - 30" to 24" Reducer "	370 320	110.32	
1 - 6" Standpips - not attached "	42	97.74	
1 - 36" x 6' Intake Sleeve - Flanged	2000	The original states	
one End each	808	165.27	
1 - 36" Flange - not attached "	208	78.60	
1 - 36 z 36" - Model 115 Headgate complete,	months and		
with 7' Frame each	950	214.90	
Approx. 30' 6" -10 ga. Spiral Welded Steel		0.00	
Pipe - Drain Line - Dipped & Wrapped per ft.	8.3	1.08	
1 - 6" -90° Elbow - Flanged each 1 - 6" c. S. Flanges attached to above	49	28.79	
Pips each	12	6.75	
6 - Air Relief Chamber Vent Pipes consisting	and the state of t		
of 12° of 6" -12 ga. Dipped & Wrapped Pipe			
with 1 - 90° Elbow attached each	100	25,00	
	5 34 L. COB		on to him Mary Lake
Style 40 Dresser Couplers Approx. 15 - 36* 0. D. each	0200	191.78	
* 26 - 30 0 D	373	158.41	
" 26 - 24" O. D. Alternate "	249	99,02	
		2000	

Terms:

F. O. B.

Above prices quoted for immediate acceptance unless otherwise stated; apply only to Project specified, subject to conditions on reverse side of this sheet. Shipment

Accepted, subject to being awarded contract	Armco Drainage & Metal Products, Inc.
Ву	By_
Date	Title State Manager - Utah & Idaho

Sheet 2 of 2 sheets

QUOTATION

HARDESTY DIVISION

ARMCO DRAINAGE & METAL PRODUCTS, INC.

						0 = 10, =		
SALT	LAKE CITY	BOISE	CALDWELL	TWIN FALLS	JEROME	ONTARIO	NYSSA	DENVER
643	SO. 3RD W	VEST STREET,	SALT LAKE CITY 10.	UTAH _ I	P. O. BOX 926	TELEPH	ONES 3-3873,	3-6257
					1	D		

Project Dewitt Springs - Davis Camp

Bids Opening

Bids Opening

Date

July 6, 1949

Time

5:00 P. M.

Place

Logen City Offices

tem No.	Description		Weight	Unit Price	
	Style 38 Dresser Couplers for joints, alternate to field we Addendum #2	all Couplers lding, as per			
	Approx. 120 - 36" O. D. 220 - 30" O. D. 220 - 24" O. D.	Each #	160# 135 105	\$30.38 24.74 19.82	
	ALL THE ABOVE PRICES ARE SUBJ	ect to 2% utah s	TATE SALES	TAX	

Terms:

 $\frac{1}{2}$ of 1% 10 days, net 30 days F.O.B. with interest at 6% per annum

thereafter

Above prices quoted for immediate acceptance unless otherwise stated; apply only to Project specified, subject to conditions on reverse side of this sheet.

All items except Dresser Couplers - jobsite Stockpiles where accessable to trucks & trailer. Dresser Coupler - cars Logan

commence approx. 60 days and complete in approx. 30 days thereafter.

Accepted, subject to being awarded contract	Armco Dainage & Metal Products, Inc.
Ву	By Attoker
Date	Title State Nanager - Utah & Idaho

Shipment

3100

THE GALIGHER COMPANY

CABLE ADDRESS GALSAL



ELGIN 9-8731

545-585 WEST EIGHTH SOUTH STREET P. O. BOX 209

SALT LAKE CITY 10, UTAH

- QUOTATION -

DATE	The state	.,	2000	
0/11	176 1 17 10			-

Anni 1 4 7067

TO QUOTATION NUMBER

Mr. Dean Peterson 71 North Second West Logan, Utah

YOUR INQUIRY_

33757

QUOTATION NO. IN REPLY PLEASE REFER

Subject: Deep Well Turbine Pump for

2250 GFM at 60° TDH

In reply to your request for quotation, we are pleased to quote as follows:

4 ea. Peerless Deep Well Turbine Pumps, water-lubricated, consisting of 40 HP, 1760 RFM, 440 volt, 3 phase, 60 cycle, vertical hollowshaft, high thrust, dripproof motor, 10 x 10 x $16\frac{1}{2}$ discharge head with manual pre-lubrication, 60° of 10" column with 1-3/16" shaft, 1 stage of 14HXB cast iron bowl with bronze impeller, 10" cone-type galvanized suction strainer.

PRICE f.o.b. Los Angeles with freight allowed to destination --- \$2,490.00 ea. \$9,960.00 lot

4 ea. General Electric Pumping Plant Panels #EOW6AVT.

PRICE f.o.b. Logan, Utah----

270.00 ea. 1,080.00 lot

To be arranged at time of order.

DELIVERY: 3 - 4 weeks after receipt of order and approval of drawings.

In the event of an order, or future correspondence, kindly refer to our Quotation No. 33757.

We trust that this proposal will have your favorable consideration.

THE GALIGHER COMPANY

Enc: Bulletin #B-139-1,

Curve #2812677

Sales Engineer Sam J. Potts/db

SUBJECT TO CONDITIONS ON REVERSE SIDE

Supplies and Equipment for Every Industry

THE GALIGHER COMPANY

CABLE ADDRESS GALSAL



TELEPHONE ELGIN 9-8731

545-585 WEST EIGHTH SOUTH STREET P. O. BOX 209

SALT LAKE CITY 10, UTAH

QUOTATION -

April 4, 1961

Mr. Dean Peterson 71 North Second West Logan, Utah

YOUR INQUIRY.

33757

QUOTATION NO.

IN REPLY PLEASE REFER TO QUOTATION NUMBER

Subject: Decp Well Turbine Pump for

2250 GFM at 60' TDH

In reply to your request for quotation, we are pleased to quote as follows:

4 ea. Peerless Deep Well Turbine Pumps, water-lubricated, consisting of 40 HP, 1760 RPM, 440 volt, 3 phase, 60 cycle, vertical hollowshaft, high thrust, dripproof motor, 10 x 10 x 162 discharge head with manual pre-lubrication, 60' of 10" column with 1-3/16" shaft, 1 stage of 14HXB cast iron bowl with bronze impeller, 10" cone-type galvanized suction strainer.

PRICE f.o.b. Los Angeles with freight allowed to destination --- \$2,490.00 ea. \$9,960.00 lot

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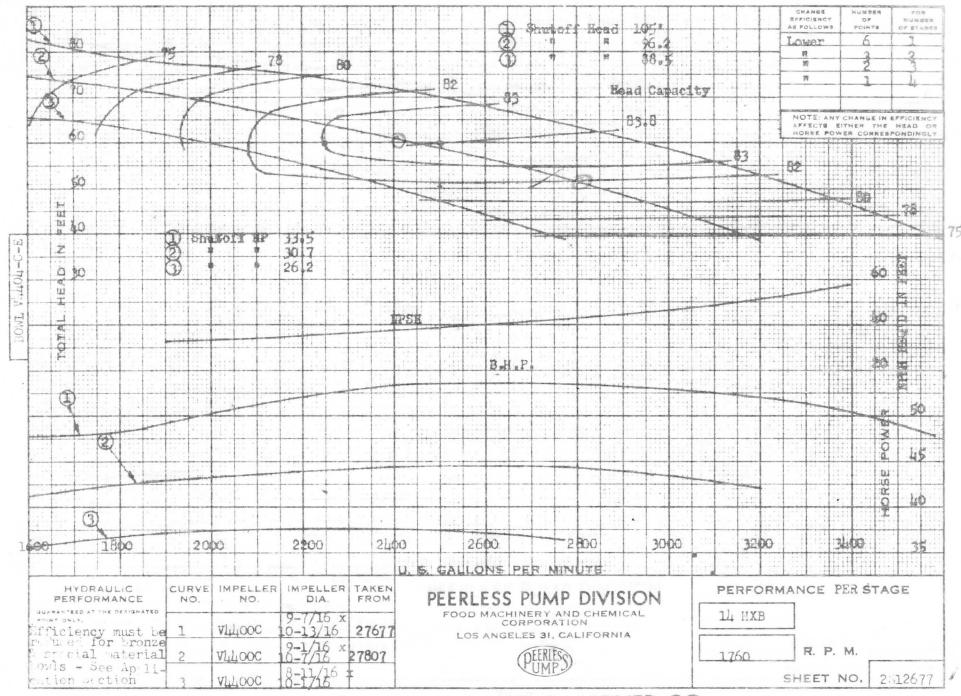
Curve #2812677

Sales Engineer Sam J. Potts/db

SUBJECT TO CONDITIONS ON REVERSE SIDE

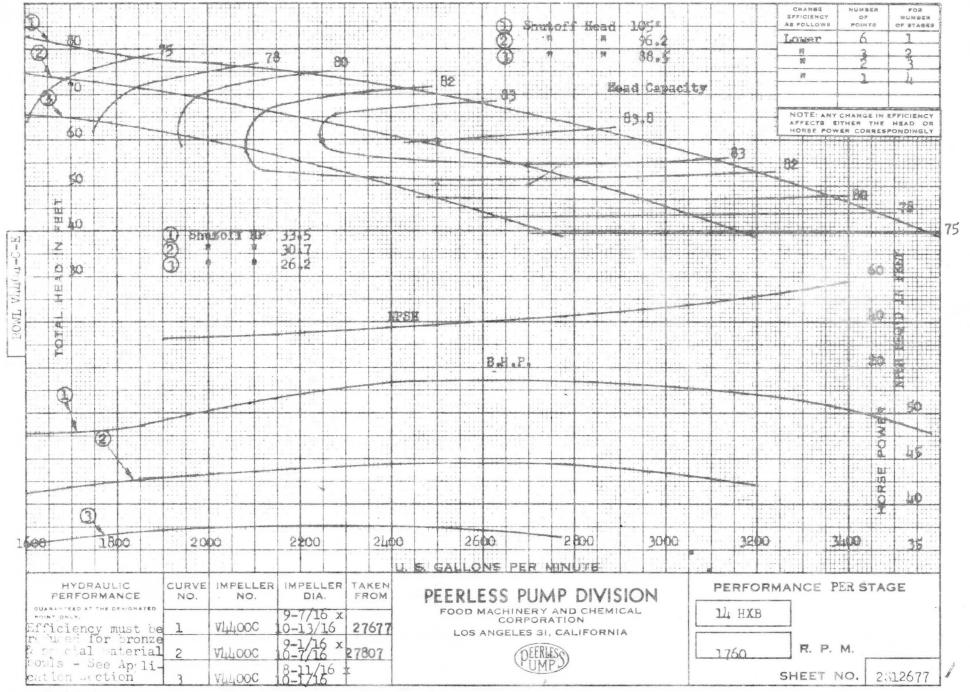
Supplies and Equipment for Every Industry

Manufacturers · Mining · Milling · Laboratory Equipment · Ore Testing · Plant Designing · Construction · Operation

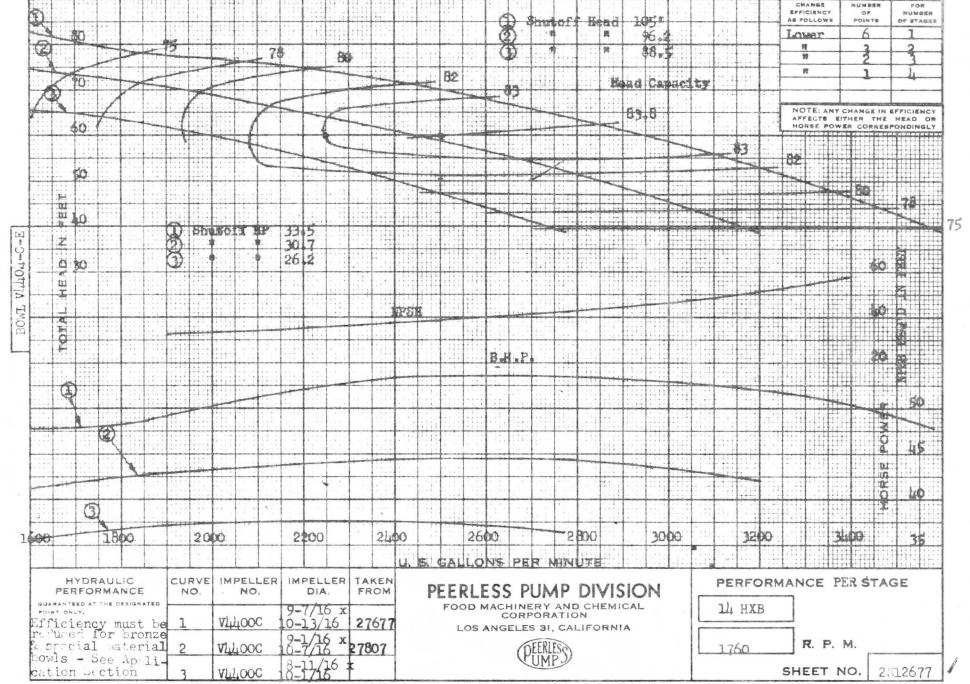


THE GALIGHER CO.

545 West 8th South — P. O. Box 209
SALT LAKE CITY 10, UTAH - ELgin 9-8731



545 West 8th South — P. O. Box 209
SALT LAKE CITY 10, UTAH - ELgin 9-8731



545 West 8th South — P. O. Box 209
SALT LAKE CITY 10, UTAH - ELgin 9-8731

13.	Perforating production wells 300 feet at \$3.50 per ft.	\$105 0.00
14.	Testing production wells 150 hours at \$17.50 per hour	2625.00
	Following is our estimate for the work to ter the proposed well contract: Ourting Drilling exploratory wells under 400 feet & 500 feet at \$6.00 per ft.	
S.	Trilling exploratory holes f PETERSON AND BI	Fletim,
8.	Casing exploratory holes up to 400 rest des	
6.	Casing exploratory holes 400 to 1000 feet deep, 400 feet at \$4.00 per ft.	1500.00
5.	Perforating exploratory holes 100 feet at \$1.75 per ft.	175.00
6.	Testing and experimental work on explorator holes, 50 hours at \$14.00 per hour	700.00
7.	Plugging exploratory boles 5 pluge at 085.00 Ea.	625.00
8.	Drilling production wells up to 400 feet deep, 1400 feet at \$11.50 per ft.	16,100.00
9.	Drilling production wells 400 to 700 feet deep, 300 feet at \$14.00 per ft.	4200.00
10.	Drilling production wells 700 feet to 1000 feet doop, 100 feet at \$17.00 per ft.	2,700.00
11.	deep, 1400 feet at \$9.20 per ft.	13,889.00
22.	Casing production wells 400 feet to 1000 feet deep, 400 feet at 00.20 per ft.	5680.00





Wheeler MACHINERY CO.

PROFIT Caterpillar

330 WEST 21st SOUTH STREET SALT LAKE CITY 15, UTAH
TELEPHONE HUNTER 7-7811

June 22, 1962

TO Logan City Corporation Logan, Utah

QUOTATION

THIS QUOTATION REFLECTS PRESENT PRICES, BUT IS SUBJECT TO ADJUSTMENT TO WHATEVER MANUFACTURERS PRICES EXIST AT TIME OF SHIPMENT.

WHETHER OR NOT SPECIFICALLY SET FORTH, THIS QUOTATION IS SUBJECT TO FEDERAL OR STATE TAX THAT MAY BE APPLICABLE; ALSO TO FREIGHT CHARGES IF QUOTATION IS FOB FACTORIES.

WE ARE PLEASED TO QUOTE ON THE FOLLOWING, SUBJECT TO CONDITIONS LISTED BELOW.

QUAN- TITY	DESCRIPTION OF MATERIAL	GROUP NUMBER	APPROX. WT. POUNDS	UNIT PRICE	EXTENSIONS
1	Caterpillar G342 Naturally Aspirated Natural gas engine, 10.5:1 compression ratio With the following installed equipment: Air cleaner service indicator Rail type base		5,350 . 3 220	5,835.00 20.00 172.00	
	Free flow engine cooler	18-61-24	1,200	520.00	
	Primary fuel filter Maxim M21 (12-6") muffler for residential	3L8402	4	28.00	
	silencing, includes flex adapter	5L8225	294	370.00	
	Enclosed clutch Direct electric starting system	5L1375	400	430.00	
	24 volt, batteries not included	5L5571	89	280.00	
	Charging generator Safety shutoff, overspeed oil pressure	1L9677	70	140.00	
	and water temp. actuated	4L3738	24	285.00	
	Gas shut-off valve	5L9314	7	75.00	
	Total FOB Factory Estimated Freight		7,661	8,155.00 459.66	
	FOB Salt Lake City			8,614.66	

F. O. B.

Terms:

Approximate Delivery:

CONDITIONS:—This quotation subject to change without notice. Prices quoted are subject to existing taxes.



Honorable Logan City Commission Logan, Utah

Gentlemen:

Our estimate for the cost of installing a deep-well turbine pump of 3150 G.P.M. capacity, 170 feet lift complete with electric motor drive; magnetic, reduced voltage starter; and 30 feet of outlet pipe and appurtenances for the well at Site No. 3 as detailed in our specifications dated June 19, 1962 complete in operable condition is Eleven Thousand Seven Hundred and Fifty Bollars. (\$11,750.)

Bishop & Peterson

Clean Freton

55,000.00

Booster at Well 3 including 75° 16" C.I. pipe \$30,000.00

\$24,000.00 30,000.00

Mr. Ray Hugie as well 2 including 4,000 12 C.I. City Engineer Logan, Utah Logan, Utah Booster

UDear Mr. Hugie

We have made an estimate for the cost of completing the well program based on the following assumptions:

- 1. Well 1 will be drilled to 1,000'; Well 2 to 900'. These two wells are estimated at 5 c.f.s. each.
 - 2. Well 4 will be redrilled to 600' and will produce 10 c.f.s. We will take credit for the amount already paid the driller. This would probably cost \$175,000
- de standpola 3. A booster pump station will be installed at Well 3 to pump 7.5 c. f. s. into the system whenever the reservoir or the line pressure drops below a certain amount. This will require approximately 75' of 16" pipe and a gate valve to be installed by the City.
 - 4. A booster pump station will be installed at Well 2 to pump 5 c.f.s. into the line. This will require some work on the distribution system, tentatively estimated at 4,000. of 12" pipe and a check valve to be installed by City forces or by contract.

Paid prior to July 1, 1962 \$23,202.00 Paid since July 1, 1962 44,735.00 \$67,937.00 Total to date

Complete Well 1 with deep well pump \$21,537.50 Complete Well 2 with deep well pump 15,550.00 Redrill Well 4 and install deep well pump 24,512.00 Regulate Canyon line 7,500.00 Retention due T.S.I 6,130.00 6,000.00 Engineering, etc

Additional cost to complete wells equipped with deep well pumps and to regulate line to prevent waste

\$81,229.50

Booster at Well 3 including 75' 16" C.I. pipe

\$30,000.00

Booster at Well 2 including 4,000' 12" C.I.

and engineering

Booster Dear Mr. HuPipe

\$24,000.00 30,000.00

\$56,000.00 We hav Cost of booster programthe cost of completing86,000.00

well program based on the following assumptions:

This would give us a good versutile system at this stage. It would probably require one year to fully complete. Some costs could be deferred by not installing the deep well pumps on some of the wells or by deferring one or both of the booster installations.

We will take oredit for the amount already Consideration might be given to replacing the 7,800' 20-in. steel canyon line with 30-in. This would probably cost \$175,000 to \$200,000 alshough we have not gone into this from a price standpoint. We would imagine, also that you would want to place a higher priority than this on your master distribution system development.

will require approximately 75° of 16" pipe and a gate valve to be installed by the City.

4. A booster pump station will be installed at Well 2 to pump 5 e.f.s. into the line. Bishop land Peterson me Work on the distribution system, tentatively estimated at 4,000° of 12" pipe and a check valve to be installed by Gity forces or by contract.

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Additional cost to complete wells equipped with deep well pumps and to regulate line to prevent waste

381,289,50

PACIFIC STATES CAST IRON PIPE GO.

MCWANE-PACIFIC BOLTITE MECHANICAL JOINT . BELL AND SPIGOT PRESSURE PIPE . GATE VALVES . FIRE HYDRANTS

General Office and Foundries

P. O. Box 18, Provo, Utah

SALES DEPARTMENT

December 18, 1962

Logan City Corporation Quotation No. c/o Engineering Department Logan, Utah

A SALES OF STREET STREET, SALES STREET, SALES STREET, SALES STREET, SALES SALE SUBJECT: Cast Iron Pipe & Valves

WE ARE PLEASED TO QUOTE YOU ON MATERIALS SET FORTH BELOW CONFORMING TO SPECI-FICATIONS IN OUR CATALOG AND SUBJECT TO THE TERMS AND CONDITIONS AS MENTIONED ON THE BACK OF THIS SHEET AND HEREBY MADE A PART HEREOF ON THIS PROPOSAL, EX-CEPT AS HEREINAFTER MODIFIED:

MEDICA ACCREATER TO ETATION OF THE TERM

4" Class	250 tyton tot	nt, thin cement	
	eal coated, Su		
		" lgths) PER FT.	1.41
	" brhc' (TO -T-5	Lycha, PER ET.	T * - 47 T
6"	Ditto	talify men region and refer the	2.13
8"	Ditto	the line is the said to the real state of the said	3.04
10"	Ditto	10. 图4-位对图2·台及度 "数据"的第三条。	4.01
12"	Ditto	SELLENGTH LOUR REPORT	5.14
14"	Ditto	nda paga ganta na paga na ma Manangan kangan	6.72
4" Class	250 Boltite m	echanical joint	
thin ceme	ent lined. sea	1 coated, Super	
DeLavaud	cast iron pip	e.	
(18'-2" 19		PER FT.	1.47
6"	Ditto		2.21
8"	Ditto		3.15
10"	Ditto		4.15
12"	Ditto	101:	5.31
14"	Ditto	u	6.95
4" List 4	Boltite hub	end gate valve, with	h
The second second second	N., O.L., NRS	3 valve, was	42.60
6"	Ditto		66.75
8"	Ditto		101.15
A Service and a service	(Continued on	Sheet No. 2)	

Date 12/18/62

Sheet No.

Boltite hub end gate valve O.N., O.L., NRS	157.85
Boltite hub end gate valve O.N., O.L., NRS	206.30
, mech. joint, gate valve O.N., O.L., NRS	534.36

TERMS: NET 30 DAYS

PRICES ARE QUOTED F.O.B. TRUCKS, JOBSITE WHERE READILY ACCESSIBLE TO STANDARD TRUCK & TRAILER EQUIPMENT IN 42,000# MINIMUM TRUCKLOAD QUANTITIES. CUSTOMER TO FURNISH MEN & EQUIPMENT TO UNLOAD MATERIALS. WE ARE THEATER TO SHOULD FOU OR MAINTIMES SET FORTH DELIN CONTRACTOR TO SPACE

There are no agreements or verbal understandings outside of this proposal. The foregoing shall become a contract agreement only when accepted by you as purchaser and approved in writing by an executive officer of our company at our home office at Provo, Utah. And subject to the Terms and Conditions printed on the back of the first sheet of this quotation.

PACIFIC STATES CAST IRON PIPE COMPANY WATERWORKS EQUIPMENT COMPANY PER:

William J. Speir*m Seles Office

(John J. Perkins)

To the PACIFIC STATES CAST IRON PIPE CO.:

Your proposal as above is hereby accepted this

day of19	APPROVED AT PROVO, UTAH, this
(continued	day of19
Ву:	Ву:
(Title)	Vice-President and Treasure

PACIFIC STATES CAST IRON PIPE CO.

MCWANE-PACIFIC BOLTITE MECHANICAL JOINT * BELL AND SPIGOT PRESSURE PIPE * GATE VALVES * FIRE HYDRANTS

General Office and Foundries

P. O. Box 18, Provo, Utah

SALES DEPARTMENT

to r-binde o

December 29, 1962

Logan City Corporation c/o Engineering Department Logan, Utah

Quotation No.

Vice-President and Treapurer

SUBJECT: C.I. Pipe & Valves

WE ARE PLEASED TO QUOTE YOU ON MATERIALS SET FORTH BELOW CONFORMING TO SPECI-FICATIONS IN OUR CATALOG AND SUBJECT TO THE TERMS AND CONDITIONS AS MENTIONED ON THE BACK OF THIS SHEET AND HEREBY MADE A PART HEREOF ON THIS PROPOSAL, EX-CEPT AS HEREINAFTER MODIFIED:

THIS SUPERSEDES & CANCELLS OUR QUOTATION DATED 12/18/62

4" Class 150	Tyton Loint, T	hin Cement	Lined,	
Seal Coated.	Super DeLawaud	Cast Iron	Pipe,	
(18'-14" Lqtl		A SHARLEST TOP OF	per ft.	1.425
6"	Ditto		Christian File Control	2.135
8"	Ditto			3.04
10"	Ditto		n Marie and Arm	4.01
12"	Ditto			5.14
14"	Ditto			6.72
16"	Ditto		re cartifica.	8.005
4" Class 150	Boltite Mech.	Joint Thin	Cement Line	d
Seal Coated,	Super De Lavau	d Cast Iron	n Pipe,	
(18'-2" lgths			per ft.	1.485
6"	Ditto	MAN TO THE PARTY		2.215
8"	Ditto			3.15
10"	Ditto			4.15
12"	Ditto			5.31
14"	Ditto	A STATE OF THE STA	with a second	6.95
16"	Ditto			8.265

(Continued on Sheet No. 2)

Logan City Corporation To

Date 12/29/62 Sheet No. 2

4" List 4 Boltite Hub End Gate Valve, with 2"	
Sq. O.N., O.L., NRS	42.60
6" Ditto	65.75
8" Ditto	101.15
10" Ditto	157.85
12" Ditto	206.30
14" Mueller, Mech. Joint Gate Valve with 2"	
Sq. O.N., O.L., NRS	534.36
16" Ditto	702.56

TERMS: NET 30 DAYS

PRICES ARE QUOTED F.O.B. TRUCKS, JOBSITE WHERE READILY ACCESSIBLE TO STANDARD TRUCK & TRAILER EQUIPMENT IN 42,000# MINIMUM TRUCKLOAD QUANTITIES. CUSTOMER TO FURNISH MEN & EQUIPMENT TO UNLOAD MATERIALS.

PRICES FOR ESTIMATING ONLY

CC: Dr. Dean Peterson School of Engineering Utah State University Logan, Utah

There are no agreements or verbal understandings outside of this proposal. The foregoing shall become a contract agreement only when accepted by you as purchaser and approved in writing by an executive officer of our company at our home office at Provo, Utah. And subject to the Terms and Conditions printed on the back of the first sheet of this quotation.

> PACIFIC STATES CAST TRON RIPE COMPANY Per WATERWORKS EQUIPMENT COMPANY

(John J. Perkins

By William J. Speir Spales Office

To the PACIFIC STATES CAST IRON PIPE CO .:

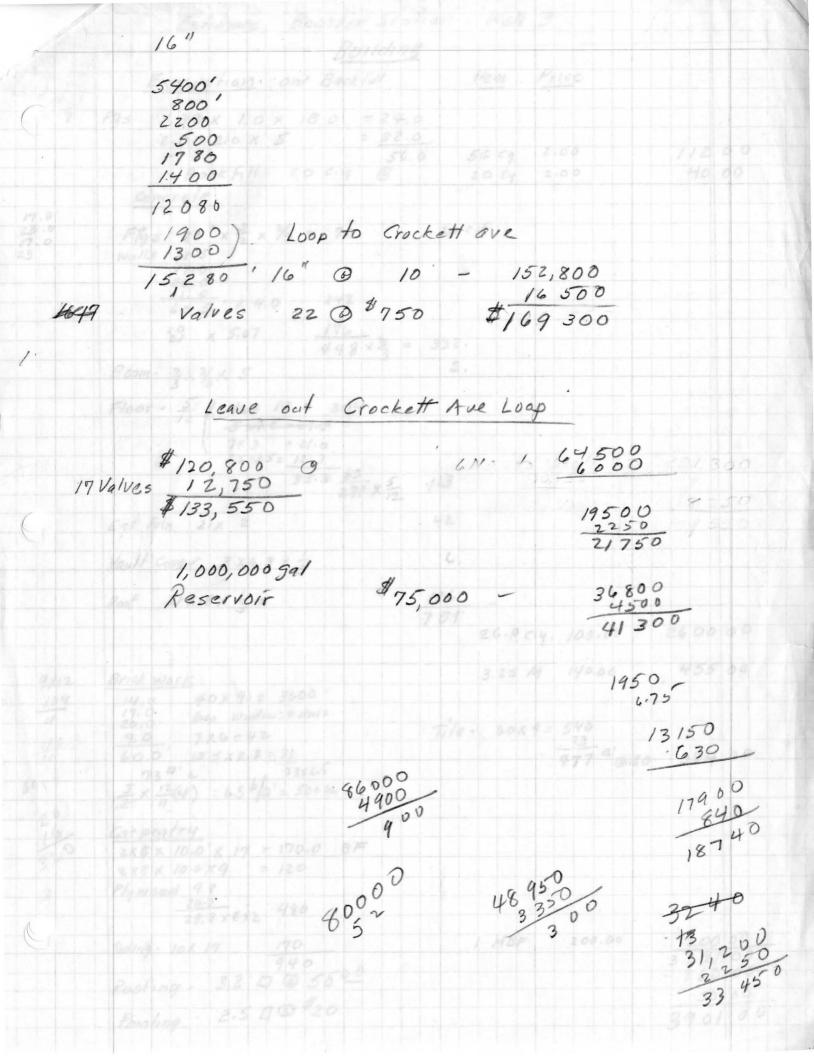
Your	proposal	as	above	is	hereby
accer	ted this				

day of 19	APPROVED AT PROVO, UTAH, this
7.84413	day of19
Ву:	Ву:
(Title)	Vice-President and Treasurer

WORKS LOGAN LINE ESTIMATE FOR CONTROL by John Perkins. Dec. 1962 \$ 2,300 Butterfly Valve Controls for Spring and Chlor, Chlorinator By-Pass Valves 5,000 # 12,300 Est by Perkins Valve Pit, engry, Contingencies Est by DF.P. \$ 14.000

	Estimate Booster Sta	tion - Wel	113		
	Storet Steel Building	9	FWd	340-1	
	Excavation and Backfill	Hem	Price		
7	F_{35} 1.33 x 1.0 x 180 = 24.	0			
	2.0 12.0 1		2 00		- 0
	Back fill 20 Ciy @	20 cy	2.00	112	00
	concrete	1720		354	
17.0	THE 6.3				
23.0 17.0 23	Ftgs 80' x = x 2/3 = 80	80 C.F			
	17.0 20.0 11.0 60.5 × 4.0 242				
	60.5' × 4.0 242			1201	
	19 × 547 176			180	
	127 × 5.67 176 498×3 =	332.			
	Beam - 3 x 2/3 x 5	2,			
	Floor - $\frac{5}{12}$ / $16 \times 19 = 304$ $\frac{5 \times 7.5 = 37.5}{7 \times 3} = 21.6$				
20×17	7×3 = 21.6 3.5×3.5= 12.3			100.0	
	33.3 33 271 × 5 271 × 12	/13		4913	
	Egt Feln 21x 2	42			
	Vault Cover 3 x 6.3 x 1/3	۷,			
	Roof 21 X18 X =	126			
		26.0	ciy, 100.00	2600	00
		24.7	19. 100.00	2600	
9x12	Brick work. 14,0 40×90 = 3600	3.25	M 140.00	455	00
108	17.0 loss Windows & doors.				
	9.0 7x6=42	Tile. GOX	9 = 540		
110	$\frac{9.0}{60.0}$, $7 \times 6 = 42$		477 2 @.80	294	00 ?
601	3 x 12(4) = 6.5 b/a' = 500 ba.		7 7 6.80	307	
100					
100	Carpentry 2x6 x 10.0' x 17 = 170.0 BF				
3.	2×8× 10.0×9 = 120				
. 3	Plywood 9.8				
	Plywood 9.8 20.0 29.8 x 8 x 2 480				
	Siding - 10x 17. 170	1 MBF	200.00	3791.	00
	Roofing - 3,2 4 @ 50 -			- 760.	00
	Painting . 2.5 4 @ \$200			3901	00
M. M. Nic.					100

27	Fwd	3901
	Struct Steel 57' @ 11.8 = 674 22' @ 6.5 = 143 8×10×2.75 = 220 6×5/2×5/2×15,316	
	Clips - 10 10 1363 4 1720 0.20	354.00
	Door frame . 14'. @ 11,5 # 161 Lintels . 21' @ 9.8 204 367	
149	Doors - Installed Windows - Installed	120,00
	Misc Hardware.	75.00
	Ventilator - eve and Gracket Ave Loop Heater Electrical	150.00
20×17	Values 12,750	#4915
	10%0	5,406,00
	1,000,000 gal Reservair \$75,000 - 34,	300
		150
		13150
	94900	179 0 0
	48,950	32 0 / 1 13 60 / 1
		31,72,00



Logan City Corporation

Operating Cost on Well, Caterpillar Natural Gas Engine

Well #3, 3150 GPM, 185' design head Estimated pump efficiency - 85%

HP required = GPM X H = 3150 X 185' = 203 HP 3960 x pump eff. 3960 X .85

Engine Required - Caterpillar G342NA, 10.5:1, 225 HP continuous @ 1200 RPM

Estimated Operating Cost Cat G342NA

Lube Oil Filters (required)	2	
Cost each	1.14	
Change Period (hours)	300	
Cost/hour = $\frac{2 \times 1.14}{300}$ =	.0076	.008
Lube Oil Capacity (gallons)	8.75	
Cost per gallon	1.15	
Change Period (hours)	300	
Cost/hour = $\frac{8.75 \times 1.15}{300}$ =	.033	.033
$\frac{\text{Make Up Oil (GPH)}}{5000} = \frac{225}{5000} =$.045	
$Cost/hour = .045 \times 1.15$.052	.052
Spark Plugs (quantity)	6	
Cost each	2.28	
Change Period (hours)	10,000	
Cost per hour = $\frac{6 \times 2.28}{10,000}$ =	0.001	0.001
Fuel Consumption		
BTU/BHP-HR (LHV)	7100	
BTU/Ft3 gas	900	
Cost per 1000 Ft ³	0.345	
Cost per hour = $7.100 \times .225 \times .345 =$	0.55	0.55
Maintenance & Overhaul		
Cost at 30,000 hours	1200	
Cost per hour = $\frac{1200}{30,000}$ =	.04	0.04
Total Cost per Hour =		\$ 0.684
Total Cost Per BHP/Hr		0.00304
Total Cost Per KWH		0.0054
Total Cost Per Month based on 720 hrs/month		\$ 491.38

Estimated Operating Cost of 210 HP Electric Motor

Based On the following:

\$0.05 first 30 KW

0.04 next 90 KW

0.03 next 270 KW

0.02 next 810 KW

0.01 all over 1200 KW

$$KW = HP X .746 = 210 x .746 = 174.1$$
Motor eff. .90

KWH per month = $174.1 \times 720 = 125,352$

First 30 KW @ .05 =	\$ 1.50
Next 90 KW @ .04 =	3.60
Next 270 KW @ .03 =	8.10
Next 810 KW @ .02 =	16.10
124,152 KW @ .01 =	1241.52

Total power cost per month for 210 HP Motor

\$ 1,270.82

Savings per month of "Cat" engine versus electric motor

779.44

January 25, 1963

Mr. Dennis Thompson Waterworks Equipment Co. 502 West Third South Salt Lake City, 10, Utah

Dear Mr. Thompson:

In reference to your telephone call to Dr. Bishop our estimates for NSPH at the inlet of the centrifugal pump are as follows:

Q	NS.	PH
3000 g.p.m. 3250 3500 3750 3975	5- 4- 3- 1-	8

A review of our studies on the line indicates that a specification of 3400 g.p.m. at 216' is still the best design judgement we can make. The 10" 5813 impeller, trimmed to 15", curve furnished us satisfies this criterion. This curve shows 198' at 3750 g.p.m. which with 12' suction head and 12' friction losses between the pump and city main would coincide with 176' in the main, which we believe would rarely occur. In any case the back pressure valve can be set so that the NSPH can be controlled at any value necessary to prevent cavitation. A vacuum indicating guage has been included near the pump inlet so that this adjustment may be made under actual operating conditions and it is our intention to check this out under a performance test before placing in regular service. Although requested, we have been unable to obtain information from your company on permissable NSPH. If the 18' specification is unrealistic, please advise us what is permissable.

For the motor the rated horsepower shall be equal to or greater than required to drive the pump within the limits of the head and discharge requirements stated and under a load of 1.15 times such rated horsepower the temperature rise shall not exceed 40 degrees C. at altitude 4500'. We are clarifying this point by an addendum to the specifications.

I hope we may have pricing information for our estimate soon.

Yours very truly,

DH

cc: City Engineer

Summary of Bids, Pumping Plants for Welds No. 1 and 4. Logan, Utah, April 21 1964

		#/	#2	#3	#4	#5	#6	#7	# 8	# 9	# 10
	25 0 7 /							/			
	Clar D Berntsen	26663	7402 -	2473 -	5814-	2267	5467 -	8317	4333	4997 -	3942-
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	Sub totals					AHHY	43582-		A		22393 -
	Mountain -						A			1000	65975
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	Total		Reed or Lavo			AHH					
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11						AHH	A		A	Controls- Bledg -	Dave Phillips
						A					Thomson.
1/-										Elect.	100013071
						A					
1						AHHI	14				
1	Engineers Estimate	28000	7500	3500	7500	3200	8000	12200	3000	3500	5000
	ENGINEERS COMMONE	23000	1309	2200	1000	3200	57700	123.00	3000	55	238/0
							3/100		AHHH		CO. P. Co. Co. Co. Co. Co. Co. Co. Co. Co. Co
- Cont			A SHARE THE PARTY OF THE PARTY		A SINGLE STATE OF	ATTEMENT	ANDERSON	A CONTRACTOR			81500

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TFEM	PRELIMINARY	ESTIMATE	1000	WELL / +	-4
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Mr. May Hugie Gity Engineer Logan, Utah

Dear Mr. Hugie:

Following is our estimate for the cost of the pumping stations at Water Supply Wells 1 and 4.

Well No. 1

Item 1. Item 2. Item 3. Item 4. Item 5. Item 6.	Water Meter and Recorder Piping and Fittings	\$28,000 7,500 3,500 7,500 3,200 8,000
	Subtotal, Well No. 1	\$57.700
	Mell No. &	
Item 7. Item 8. Item 9. Item 10.	. Canal Discharge Line and Outlet . Measuring and Recording Equipment	\$12,300 3,000 3,500 5,000
	Subtotal, Well No. 4	\$23,800
	Total Construction cost	\$81,500
	Engineering and Contingencies, 15%	12,225
	Total Project cost	\$93.725

BISBOP AND DETERMINE

Dean Hetim

Mr Ray Hugie	
Mr Ray Hugie City Engineer Logun, citas	
Dear Mr. Hugie:	
Following is our estimate	for the
cost of the pumping stations at	
Wells 1 and 4	
Well No. 1	#27.004
Hem 1, Punys and Driver Equipment	\$28,000
Hem 2, Special Valves	7,500
Hem 3. Water Meter and Recorder	3,500
Horn 4. Paping and Fittings	7,500
1tem 5. automatic Panels and Entrols	3,200
1 tim 6. Pumphouse	8,000
Subtotal, Well No 1	7 \$57,700
Well No 4	
Hem 7. Pump and Driver	\$12,300
Hem 8. Canal Descharge Line and Outlet	3,000
Hem 9. Measuring and Recording Equipment	3,500
Hem 10. Pumphouse	5,000
Sublotal, Well No 4	23,800
Total Construction Cost	#81,500
Engineering and Contingencia, 15%	12,225
Total Project Cost	#93,725
	ND PETERSON