

City of Bishop  
Bishop, Inyo County, California

ADDENDUM NUMBER 1

to  
Specifications for  
City Well Number 4

Bid Opening Date: 14 April 1969

Make the following corrections to the specifications:

1. On Page BP-1

Delete first paragraph

Add new first paragraph as follows:

"Bids will be received until 7:30 p.m. on  
the 14th day of April 1969, at the office  
of the City Clerk, Bishop, California."

26 March 1969  
KB/mj

Engineering-Science, Inc.  
3260½ Rosecrans Street  
San Diego, California 92110

CITY OF BISHOP

INYO COUNTY, CALIFORNIA

SPECIFICATIONS FOR  
CONSTRUCTION AND  
DEVELOPMENT OF  
CITY WELL NO. 4

ENGINEERING-SCIENCE, INC.  
3260½ Rosecrans Street  
San Diego, California 92110  
(714) 224-3618

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NOTICE INVITING SEALED PROPOSALS (BIDS)

FOR

DRILLING AND FINISHING

WELL NO. 4

NOTICE IS HEREBY GIVEN that the City Council of the City of Bishop invites all and will receive sealed proposals (Bids) up to the hour of 7:30 P.M. on the 14th day of April 1969 for drilling, casing and finishing Well No. 4 and other appurtenant work per Drawings and Specifications.

The City Council of the City of Bishop reserves the right to reject any and all bids.

Copies of the contract documents are on file and may be examined in the office of the City Clerk, City Hall, City of Bishop, California. Copies may be obtained either at said office or at Engineering-Science, Inc., 3260½ Rosecrans Street, San Diego, California.

Each proposal (bid) shall be made out or submitted on the form included with the specifications and must be accompanied by a cashier's check, a certified check, or a bidder's bond in an amount not less than ten percent (10%) of the amount of the bid, made payable to the order of the City of Bishop and each bid proposal shall be sealed and filed with the City Clerk at or before the time provided in this Notice. The above-mentioned check or bond shall be given as a guarantee that the bidder will enter into a contract with the City if awarded the work, and will be declared forfeited if the successful bidder refuses to enter into said contract.

The successful bidder will be required to furnish a faithful performance bond in an amount equal to one hundred percent (100%) of the contract price and a labor and material bond in an amount equal to one hundred percent (100%) of the contract price, said bonds to be obtained from a surety company satisfactory to the City.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the Contract. A list of the wage rates is included with this Notice.

All terms and conditions contained in the contract documents including the information to Bidders shall become a part of the contract. No bidder may withdraw his bid for a period of forty-five (45) days after the time set for the opening thereof. A time limit of 80 days has been set for the completion of the work from the date of execution of the contract.

BIDDERS ARE HEREBY NOTIFIED THAT, pursuant to the Labor Code of the State of California, the City of Bishop has ascertained and determined the general prevailing rate, of per diem wages, and the general prevailing rate for legal holiday and overtime work in the locality in which said work is to be performed for each craft classification or type of workman needed to execute the contract for said work which contract will be awarded to the successful bidder. The general prevailing rates so determined are as hereinafter provided. Wages for trades not specifically listed, and wages to be paid for overtime and holiday work shall not be less than the prevailing rates in the Bishop area of Inyo County, California.

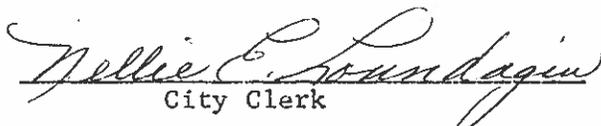
<u>Classification</u>	<u>Hourly Wage Rate</u>
<u>LABORERS</u>	
Health and Welfare - 25¢ per hour	
Pension 35¢ per hour	
Vacation - 25¢ per hour	
Foreman - Receives not less than 30¢ per hour more than the hourly wage rate of the highest classification over which he has leadership.	
Laborer - General or Construction	\$4.145

OPERATING ENGINEERS

Health and Welfare - 30¢ per hour	
Pension - 60¢ per hour	
Vacation - Holiday - 30¢ per hour	
Foreman - 35¢ per hour over the hourly rate of the highest operating Engineer's classification under his direction.	
Group 1	\$4.68
Group 2	\$4.92
Group 3	\$5.16
Group 4	\$5.27
(includes Drilling Machine Operator)	
Group 5	\$5.46
Group 6	\$5.56

BY ORDER OF THE CITY COUNCIL OF THE CITY OF BISHOP, INYO COUNTY, CALIFORNIA.

Dated this 10<sup>th</sup> day of March 1969.

  
Nellie E. Lundagin  
City Clerk

*Put. DR Mar. 13, 20, 1969*

City of Bishop  
Inyo County, California

SECTION IB

INSTRUCTION TO BIDDERS

IB-01. Securing Documents. Plans, specifications and other contract documents will be available for examination without charge, and copies may be secured in accordance with the foregoing "Notice Inviting Bidders".

IB-02. Examination of Plans, Specifications and Site of Work.

The bidder is required to examine the site of work, the proposal, the plans, and the specifications very carefully. He shall satisfy himself as to the character, quality, and quantities of the work to be performed, the materials to be furnished and the requirements of the Contract Documents. The plans for the work show conditions as they are believed to exist, but it is not to be inferred that all the conditions as shown thereon are actually existent, nor shall the Owner or any of its officers be liable for any loss sustained by the Contractor as a result of any variance between conditions shown on the plans and actual conditions revealed during examination or progress of the work. The submission of a proposal shall be prima facie evidence that the bidder has made such an examination.

IB-03. Interpretation of Drawings and Documents. If any bidder should find discrepancies in, or omissions from the drawings, specifications, or other proposed contract documents, or if he should be in doubt as to the true meaning of any part thereof, he shall at once make a written request to the Engineer for correction, clarification or interpretation of the point or points in question. The person submitting such a request shall be responsible for its prompt delivery.

In the event that the Engineer received such a request and it should be found that certain essential information is not clearly and fully set forth, or if the Engineer discovers errors, omissions, or points requiring clarification in the drawings, or documents, a written addendum will be mailed to each person to whom a set of contract documents has been delivered. The Owner will not be responsible for any instructions, explanations, or interpretations of the documents presented to bidders in any manner other than written addendum.

IB-04. Addenda or Bulletins. The effect of all addenda to the contract documents shall be considered in the bid, and said addenda shall be made a part of the contract documents and shall be returned with them. Before submitting his bid, each Bidder shall inform himself as to whether or not any such addenda have been issued, and failure to cover in this bid any such addenda issued may render his bid informal and result in its rejection.

IB-05. Disqualification of Bidders. No person, firm or corporation shall be allowed to make, file, or be interested in more than one bid for the same work unless alternate bids are called for. A person, firm, or corporation who has submitted a sub-proposal to a bidder, or who has quoted prices on materials to a bidder, is not hereby disqualified from submitting a bid in his own behalf.

IB-06. Proposals. Bids to receive consideration shall be in accordance with the following instructions:

a. Bids shall be made only upon the forms attached to, and forming a part of, the specifications and shall not be detached therefrom: all bid items shall be properly filled out; numbers shall be stated in figures, and the signatures of all persons signing shall be in longhand. No bid detached from these contract documents will be considered.

b. All prices and notations must be in ink or typewritten. No erasures will be permitted. Mistakes may be crossed out and corrections typed or written in ink adjacent thereto, and must be initialed in ink by the person or persons signing the bid.

c. Bids shall not contain any recapitulation of the work to be done. Alternate proposals will not be considered except as required hereinabove. No oral, telegraphic, or telephonic proposals or modifications will be considered.

d. The Owner may require any bidder to furnish a statement of his experience, financial responsibility, technical ability, equipment, and references properly and fully filled out.

e. Each bidder shall list his proposed sub-contractors on the form accompanying the proposal in accordance with the provisions of the specifications.

f. Each bidder must accompany his bid with either a cashier's check upon some responsible bank, or a check upon such bank properly certified, or an approved corporate surety bond payable to the Owner for a sum of not less than ten (10) percent of the aggregate sum of the bid, which check or bond and the monies represented thereby shall be held by the Owner as a guarantee that the bidder, if awarded the contract, will in good faith enter into such contract and furnish the required bonds.

The bidder agrees that, in case of his refusal or failure to execute said contract and give said bonds within the time required by these documents, such check or bond, and the money represented thereby, shall remain the property of the Owner and, if the Bidder shall fail to execute said contract, said surety will pay to the Owner the damages which the Owner may suffer by reason of such failure, not exceeding the

sum of ten (10) percent of the amount of the bid. A bid received and not accompanied by such cashier's check, certified check, or approved bond may be rejected.

g. Bids shall be delivered to the Owner, at the location stipulated, on or before the day and hour set for the opening of bids, as hereinbefore specified in the "Notice Inviting Bids". Bids shall be enclosed in a sealed envelope, and bearing the title of the work and the name of the bidder.

IB-07. Licensing of Contracts. All persons, firms, partnerships or corporations shall be licensed in accordance with the Business and Professions Code of the State of California and the applicable ordinances of the county before doing any work of any kind within the public right of way of the county.

IB-08. Withdrawal of Bid. Any bidder may withdraw his bid in person or by written request at any time prior to the scheduled closing time for receipt of bids.

IB-09. Opening of Bid Proposals. The Owner will, in open session publicly open, examine, and declare the bids at the time set forth in the Notice Inviting Bids. Bidders or their authorized representatives are invited to be present.

IB-10. Award of Contract or Rejection of Bids. No bidder may withdraw his bid for a period of forty five (45) days after the date set for the opening of bids. The contract for the work will either be awarded or the bids rejected within the forty-five (45) days from the date set for the opening of bids.

The Contract for the work will be awarded to the lowest responsible bidder complying with these instructions and with the "Notice Inviting Bids". The Owner, however, reserves the right to reject any or all bids, and to waive any informality in the bids received.

The bidder to whom the award is made shall execute a written Contract Agreement with the Owner and furnish the stipulated bonds within ten (10) days after the notice of award of contract. The Contract Agreement shall be made in the form adopted by the Owner.

If the bidder to whom the award is made fails to enter the contract as herein provided, the award may be annulled and an award may be made to the next lowest responsible bidder: and such bidder shall fulfill every stipulation embraced herein, as if he were the party to whom the first award was made. A corporation to which an award is made shall furnish evidence of its corporate existence and evidence that the officer signing the contract and bonds for the corporation is duly

authorized to do so.

IB-11. Bonds. The successful bidder, simultaneously with the execution of the Agreement, will be required to furnish a labor and materials bond in a sum not less than 100 percent of the total amount payable by the terms of the contract, and a faithful performance bond in a sum not less than 100 percent of the amount of the contract; said bonds shall be secured from a surety company satisfactory to the Owner. Surety companies, to be acceptable to the Owner, must be authorized to do business in the State of California and be on the accredited list of the United States Treasury.

IB-12. Time of Performance. The work shall be commenced within fifteen (15) calendar days from date of execution of the contract, and shall be diligently prosecuted until completion. A time limit of eighty (80) calendar days from date of execution of the contract has been set for completion of the work. The bidder's attention is directed to the specifications as to provisions for extension of time of completion and/or assessment of liquidated damages.

IB-13. Assignment of Contract. No assignment by the Contractor of any contract to be entered into hereunder or of any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the awarding authority unless such assignment has had prior approval of the awarding authority and the surety has been given notice of such assignment in writing and has consented thereto in writing.

IB-14. Workmen and Wages. Attention is specifically directed to all provisions of the Labor Code of the State of California with regard to workmen and wages. Wages shall not be less than the prevailing wage rates determined by the Owner pursuant to said Code and as listed in the "Notice Inviting Bids".

IB-15. Job Tour. Assistance in the inspection of the project location can be obtained by prior arrangement with the City of Bishop Public Works Superintendent, Mr. Louis Bulpitt, Telephone (714) 872-4861.

BID PROPOSAL

FOR THE CONSTRUCTION, DEVELOPMENT, AND

TESTING OF WELL NO. 4

Bishop, California

April 1969

Bids will be received until 7:30 P.M. on the 14th day of ~~May, 1969,~~  
at the office of the City Clerk, Bishop, California.

Gentlemen:

The undersigned hereby declares, as bidder, that the only persons or parties interested in this proposal as principals are those named herein, that no public officer or employee of the City is in any manner interested directly or indirectly in this proposal or in the profits to be derived from the contract proposed to be taken; that this bid is made without any connection with any other person or persons making a bid for the same purpose; that the bid is in all respects fair and without collusion or fraud; that he has read the Notice Inviting Bids and the specifications and agrees to all the stipulations contained herein; that he has examined the site of the work, the form of Agreement and the specifications and drawings referred to therein.

The undersigned hereby proposes and agrees to furnish all of the material, labor, equipment, transportation, and services for the construction and completion of the work listed below, and in strict conformity with the plans, specifications and other contract documents on file at the office of the City Clerk of Bishop, California, at the unit prices listed below.

If awarded the contract, the undersigned agrees to sign said contract and furnish the necessary bonds within ten (10) days after notice of award of contract.

The undersigned has checked carefully all of the prices quoted and understands that the City of Bishop will not be responsible for any errors or omissions on the part of the undersigned in making up this Bid Proposal.

Attached please find Bidder's Bond or certified check, Check No.

\_\_\_\_\_ of the \_\_\_\_\_ Bank, for

\$ \_\_\_\_\_, which amount is not less

than ten (10) percent of the total amount of this bid.

BID PROPOSAL

WELL NUMBER 4

CABLE TOOL METHOD

A. BASE BID

1. Construction, development, and production testing of 500 feet of minimum 16-inch diameter well by the cable tool method and perforating 250 lineal feet of casing in accordance with the specifications and accompanying drawings. Lump Sum \$ 24,171.00

2. Move-in, setting up equipment, and re-moving drilling equipment for Well No. 4. Lump Sum \$ 2,000.00

TOTAL BASE BID..... \$ 26,171.00

B. ADDITIVE AND DEDUCTIVE ITEMS

3. Drilling and Casing the minimum 16-inch diameter Well No. 4.

For more or less than 500 linear feet add or deduct \$ 27.44 per linear foot

4. Casing Perforations: For perforating the in-place well casing in accordance with this specification:

a. Basic Equipment charge: Add Lump Sum \$ NONE

b. For more or less than 250 lineal feet of well casing perforations as selected by the Engineer, add or deduct:  
\$ 1.00 per lineal foot

5. Developing Well No. 4.

a. Swabbing: For more or less than 72 hours of actual time spent, add or deduct  
\$ 27.50 per hour

b. Development by Pumping: For more or less than 72 hours of actual pumping time, add or deduct.  
\$ 26.00 per hour

6. Production Testing Well No. 4.

For more or less than 12 hours of actual pumping time, add or deduct.

\$ 26.00 per hour

7. Standby Time for Water Sampling.

For actual time spent in the collection of water samples for testing add:

\$ 27.50 per hour

8. Optional Grout Sealing.

At the option of the Engineer, the Contractor shall perforate the casing and forcibly grout-seal selected location(s) in accordance with Section 2-10 of this specification. Additive Lump Sum for each separate sealing location:

Lump Sum: \$ 1,000.00

PROPOSAL

INFORMATION REQUIRED OF BIDDER

The bidder is required to supply the following information. Additional sheets may be attached if necessary.

4360 Worth Street

- (1) Address: Los Angeles, California 90063 (2) Telephone: (213) 261-4185
- (3) Type of Firm - Individual, Partnership, or Corporation: Corporation
- (4) Corporation organized under the laws of the State of: California (5) Contractor's License No.: #624-(C-57)
- (6) List the names and addresses of all members of the firm or names and titles of all officers of the corporation:

<u>Roscoe Moss, Sr.,</u>	<u>President and General Manager.</u>
<u>Roscoe Moss, Jr.,</u>	<u>Vice President.</u>
<u>George E. Moss,</u>	<u>Vice President.</u>
<u>A. A. Barney,</u>	<u>Secretary - Treasurer.</u>

- (7) Number of years experience as a contractor in construction work: 50 yrs.+

- (8) List at least five well projects completed as of recent date:
- | <u>Size of well</u> | <u>Type of Construction</u>    | <u>Location &amp; Date</u>               | <u>Name &amp; Address of Owner</u>         |
|---------------------|--------------------------------|--|--|
| <u>16"</u>          | <u>Cable Tool Drilled Well</u> | <u>San Jose, Calif. May - June 1968</u>  | <u>San Jose Water Works, Station 1-25</u>  |
| <u>16"</u>          | <u>"</u>                       | <u>San Marino, Calif. June-July 1968</u> | <u>California-American Water Company</u>   |
| <u>16"</u>          | <u>"</u>                       | <u>Davis, Calif. October 1967</u>        | <u>University of Calif. - Davis Campus</u> |
| <u>16"</u>          | <u>"</u>                       | <u>California</u>                        | <u>Teague-McKevitt Ranch, Santa Paula,</u> |
| <u>20"</u>          | <u>"</u>                       | <u>City of Phoenix, Phoenix, Arizona</u> | <u>June - July 1968.</u>                   |

- (9) List the name and address of each subcontractor who will perform work in or about the work or improvement in excess of one-half ( $\frac{1}{2}$ ) of one percent (1%) of the total bid price, and indicate what part of the work will be done by each such subcontractor.

<u>Name</u>	<u>Address</u>	<u>Work to be performed</u>
<u>No Sub-contractors</u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>

- (10) List the name of the person who inspected the site of the proposed work for your firm: N. P. Sheppard, Supt. Date of inspection: April 8, 1968

- (11) If requested by the City, the bidder shall furnish a notarized financial statement, financial data, or other information and references sufficiently comprehensive to permit an appraisal of his current financial condition.

The undersigned acknowledges that the quantities of work specified are approximate only, are the quantities which will be required to the best knowledge of the City at this time, and are set forth herein for the purpose of comparing bids.

The City reserves the right to reject all bids or waive any informalities and to award the bid to the best qualified bidder on either Alternate A or B. A bidder may submit on either Alternate A or B or both.

The undersigned agrees, if awarded the contract, to begin work within fifteen (15) calendar days after the date of execution of the Contract Agreement and to fully complete all work within the number of calendar days stipulated in the Instructions to Bidders after the date of execution of the Contract Agreement.

Receipt is hereby acknowledged of Addenda Number(s) 1 (26 March 69).

The undersigned is licensed in accordance with the laws of the State of California, License No. 624, Class C-57.

Individual Contractor: Name: \_\_\_\_\_

Address: \_\_\_\_\_

Partnership: Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

By: \_\_\_\_\_ Partner.

Other Partners: \_\_\_\_\_

Corporation: Name: Roscoe Moss Company

Business Address: 4360 Worth Street

Los Angeles, California 90063

By: \_\_\_\_\_ President.

Roscoe Moss

\_\_\_\_\_ Secretary.

A. A. Barney

Organized under the laws of the State of

California

(SEAL)

CONTRACT AGREEMENT

THIS CONTRACT is made and entered into by and between the City of Bishop hereinafter referred to as the "Owner" and Roscoe Moss  
Company hereinafter referred to as the "Contractor".

IT IS HEREBY AGREED BETWEEN THE PARTIES AS FOLLOWS:

First. Contract Documents. The complete Contract includes all of the contract documents, to-wit: (a) Notice Inviting Bids; (b) Instructions to Bidders; (c) Bid Proposal; (d) General Conditions; (e) Special Conditions; (f) Technical Provisions including the complete set of Plans for the Construction of City Well Number 4

(g) The Contract Agreement; (h) Performance Bond; (i) Labor and Material Bond; (j) duly issued Addenda and all modifications incorporated in the foregoing documents before execution of the Contract Agreement. The foregoing contract documents are hereby incorporated by reference and shall be deemed and considered as forming a part of this Contract Agreement as fully and to the same extent as if it were copied at length herein.

Second. The Work. The Contractor agrees to furnish all tools, labor, materials, equipment, transportation, services and supplies necessary to perform and complete in a good and workmanlike manner the construction of the work designated as \_\_\_\_\_

City Well Number 4, Cable Tool Method

in strict conformity with and in exact accordance with, the Plans and Specifications and all other Contract Documents referred to above, which documents are on file at the office of the City Clerk, City Hall, Bishop, California.

Third. Payment. The Owner agrees to pay and the Contractor agrees to accept the lump sum amount adjusted for variations of quantities, at the prices named in Bid Proposal, page BP-2 and BP-3, Cable Tool

Method, City Well Number 4

of the Bid Proposal at the time and manner set forth in the Specifications.

The foregoing shall be accepted by the Contractor as full and final compensation for all work done under this contract.

Fourth. Commencement and Completion of the Work. The Contractor agrees to begin and complete the work within the time specified in the Notice Inviting Bids. It is agreed that it would be impracticable and extremely difficult to fix the actual amount of damage and loss sustained by the Owner should the Contractor fail to complete the work in the specified time, he shall pay to the Owner, as liquidated damages, ascertain and agreed, and not in the nature of a penalty Twenty Dollars (\$20.00) a day for each day delayed, which shall be deducted from the final amount to be paid under this Contract; provided that extensions of time with waiver of liquidated damages may be granted as provided in the Specifications.

Fifth. Performance Bond and Labor and Material Bond. The Contractor agrees to furnish bonds guaranteeing the performance of this Contract and guaranteeing payment for all labor and material used under this Contract, as required by the laws of the State of California, in forms approved by the Owner. The Performance Bond shall be for an amount not less than one hundred percent (100%) of the amount of this Contract, and shall be conditioned on full and complete performance of the Contract, guaranteeing the work against faulty workmanship and materials for a period of one year after completion and acceptance. The Labor and Material Bond shall be in an amount not less than one hundred percent (100%) of the amount of this Contract, and shall be conditioned upon full payment of all labor and material entering into or incident to the work covered by this Contract. The Contractor agrees to furnish the bonds on the forms bound within these specifications.

Sixth. Insurance. The Contractor agrees to carry Public Liability Insurance, Property Damage Insurance, and Workmen's Compensation Insurance in amounts as required by the Specifications.

Seventh. American-made Materials. Only unmanufactured materials produced in the United States, and only manufactured materials manufactured in the United States, substantially all from materials produced in the United States shall be used in the performance of the Contract (with the exception of materials which are of a class or kind which are not, or which are manufactured from materials which are not, produced in the United States.)

Eighth. General Prevailing Rate of Per Diem Wages. The general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which the work is to be performed for each craft, classification, or type of workman needed to execute the Contract, have been determined by the Owner and are set forth in the Notice Inviting Bids. The general prevailing rate of per diem wages set forth in said documents is hereby incorporated herein and made a part hereof. The Contractor agrees that he, or any sub-contractor under

him, will pay not less than the foregoing specified prevailing rates of wages to all workment employed in the execution of the Contract.

Ninth. Compliance with Other Provisions of Law Relative to Public Contracts. The Owner is a public agency in the State of California and is subject to the provisions of the Government Code and the Labor Code of that State. It is stipulated and agreed that all provisions of law applicable to public contracts are a part of this Contract to the same extent as though set forth herein and will be complied with by the Contractor. These include, but are not limited to, the stipulation that eight hours labor constitutes a legal day's work and the Contractor will, as a penalty to the Owner, forfeit Twenty-five Dollars (\$25.00) for each workman employed in the execution of the Contract by the Contractor or by any sub-contractor for each calendar day during which such workman is required or permitted to work more than eight hours in violation of the provisions of Article Three, Chapter One, Part Seven, Division 2 of the California Labor Code, except as permitted by law.

IN WITNESS WHEREOF, this Contract is executed by the duly authorized agent(s) of the Owner, pursuant to Resolution No. <sup>Minute</sup> Action, and by the Contractor on the date set before the name of each.

DATED: April 25, 1969 CITY OF BISHOP, CALIFORNIA  
(Owner)  
By John T. Leggett  
(Mayor)  
Mellie E. Lundgren  
(City Clerk)

DATED: 4/22/69 ROSCOE MOSS COMPANY  
(Contractor)  
By Roscoe Moss  
President  
By A. A. D. D. D.  
Secretary

BOND NO. 072673  
PREMIUM: \$196.00

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That

WHEREAS, the City of Bishop,  
State of California, hereinafter designated as the "Owner", by  
Resolution No. \_\_\_\_\_, has awarded to \_\_\_\_\_  
(Principal)

ROSCOE MOSS COMPANY  
as the "Principal", a Contract for the construction of \_\_\_\_\_  
CITY WELL NUMBER 4  
for the Owner; and

WHEREAS, said Principal is required under the terms of said contract  
to furnish a bond for the faithful performance of said contract;

NOW, THEREFORE, ~~we the PRINCIPAL and~~  
ARGONAUT INSURANCE COMPANY

as Surety, are held and firmly bound unto the Owner in the penal sum of  
Twenty-Six Thousand, One Hundred Seventy One -----DOLLARS  
(\$ 26,171.00 ), lawful money of the United States for the payment of  
which sum well and truly to be made, we bind ourselves, our heirs,  
executors, administrators, successors and assigns jointly and severally,  
firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal,  
his or its heirs, executors, administrators, successors or assigns, shall  
in all things stand to and abide by, and well and truly keep and perform  
the covenants, conditions and agreements in said contract and any alter-  
ation thereof made as therein provided, on his or their part, to be kept  
and performed at the time and in the manner therein specified and in all  
respects according to their true intent and meaning; shall guarantee all  
work required under the said contract against faulty materials or poor  
workmanship during the construction period and for one year after the  
date of completion and acceptance of the work under said contract and  
shall indemnify and save harmless the Owner, its officers and agents as  
therein stipulated, then this obligation shall become null and void;  
otherwise it shall be and remain in full force and virtue. The Surety  
further agrees to pay reasonable attorneys fees of Owner (as fixed by  
the Court) in any proceeding by said Owner to enforce this bond.

And the Surety, for value received, hereby stipulates and agrees  
that, no change, extension of time, alteration or addition to the terms  
of the contract or to the work to be performed thereunder or the speci-

fications accompanying the same shall in any wise affect its obligations on this bond and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specification.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their seals this 21st day of April 1969, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

ROSCOE MOSS COMPANY

Principal

By [Signature]  
President

ARGONAUT INSURANCE COMPANY

Surety

By [Signature]  
Lee G. Martin - Attorney-in-Fact  
(Attach Acknowledgement)

STATE OF California }  
COUNTY OF Los Angeles } ss.

On this 21st day of April, 1969

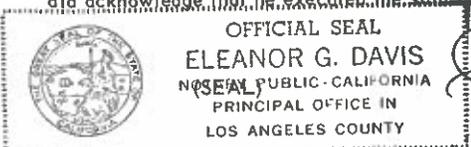
before me, a Notary Public, within and for said County and State, personally appeared \_\_\_\_\_

Lee G. Martin

to me personally known, who being duly sworn, upon oath, did say that he is the Agent and Attorney-in-fact of and for the ARGONAUT INSURANCE COMPANY, a corporation created, organized and existing under and by virtue of the laws of the State of California that the Corporate seal affixed to the foregoing within instrument is the seal of said Company; that the seal was affixed, and the said instrument was executed by authority of its Board of Directors;

and the said Lee G. Martin

did acknowledge that he executed the said instrument as the free act and deed of said Company.



[Signature]  
Notary Public

My Commission expires May 27, 1971

BOND NO. 072673  
PREMIUM: Inc. in Perf. Bond

LABOR AND MATERIAL BOND

KNOW ALL MEN BY THESE PRESENT: That

WHEREAS, the CITY OF BISHOP  
STATE OF CALIFORNIA, hereinafter designated as the "Owner", by  
Resolution No. \_\_\_\_\_, has awarded to \_\_\_\_\_  
ROSCOE MOSS COMPANY  
hereinafter designated as the "Principal", a contract for the construction  
of CITY WELL NUMBER 4

for the Owner; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract, providing that if said Principal, or any of his sub-contractors, shall fail to pay for any materials, provisions, provender or other supplies or teams used in, upon, for or about the performance of the work contracted to be done, or for amounts due under the Unemployment Insurance Code of California, or for any work or labor done thereon of any kind, the Surety in this bond will pay the same to the extent hereinafter set forth:

NOW, THEREFORE, we the Principal and \_\_\_\_\_

ARGONAUT INSURANCE COMPANY

as Surety, are held and firmly bound unto the Owner in the penal sum of Twenty-Six Thousand, One Hundred Seventy One -----DOLLARS (\$ 26,171.00) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal, his or its heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, provender or other supplies or teams used in, upon or about the performance of the work contracted to be done, or for amounts due under the Unemployment Insurance Code of California, or for any labor thereon of any kind, as required by the provisions of an act of the Legislature of the State of California entitled "An act to secure the payment of claims of persons employed by contractors upon public works, and the claim of persons who furnish materials, supplies, teams, implements or, machinery used or consumed by such contractors in the performance of such work, and prescribing the duties of certain officers with respect thereto", approved May 10, 1919, as amended, provided that the persons, companies, or corporations so

furnishing said materials, provisions, provender, or other supplies, teams, appliances or power used in, upon, for or about the performance of the work contracted to be executed or performed, or any person, company, or corporation renting or hiring teams or impliments or machinery or power for or contributing to said work to be done, or any person who performs work or labor upon the same or any person who supplies both work and materials therefor, shall have complied with the provisions of said Act, then said Surety will pay the same in or to an amount not exceeding the amount hereinabove set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fee as shall be fixed by the Court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Section 1192.1 of the California Code of Civil Procedure, so as to give a right of action to them or their assigns in any suit brought upon this bond.

And the Surety, for value received, hereby stipulates and agrees that, no charge, extension of time, alteration or addition to the terms of the contract, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any wise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their seals this 21st day of April 1969, the name and corporate seal of each corporate party being affixed hereto, and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

ROSCOE MOSS COMPANY

Principal

STATE OF California  
COUNTY OF Los Angeles } ss.

On this 21st day of April, 1969

before me, a Notary Public, within and for said County and State, personally appeared Lee G. Martin

to me personally known, who being duly sworn, upon oath, did say that he is the Agent and Attorney-in-fact of and for the ARGONAUT INSURANCE COMPANY, a corporation created, organized and existing under and by virtue of the laws of the State of California that the Corporate seal affixed to the foregoing within instrument is the seal of said Company; that the seal was affixed, and the said instrument was executed by authority of its Board of Directors;

and the said Lee G. Martin

did acknowledge that he executed the said instrument as the free act and deed of said Company.



OFFICIAL SEAL  
ELEANOR G. DAVIS  
(SEAL) NOTARY PUBLIC - CALIFORNIA  
PRINCIPAL OFFICE IN  
LOS ANGELES COUNTY

Eleanor G. Davis  
Notary Public

~~resident~~

~~COMPANY~~

~~edgement)~~

~~ney-in-Fact~~

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## GENERAL CONDITIONS

GC-01. Definition of Terms. Terms used herein are defined as follows and as in the "Glossary, Water and Sewage Control Engineering" proposed by the Joint Committee representing the American Public Health Association, American Society of Civil Engineers, American Water Works Association and Federation of Sewage Works Association.

a. Bidder: Any individual, firm, co-partnership or corporation, submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.

b. Contractor: The party of the second part, or his duly authorized agent, entering into contract with the Owner for performance of the work required by the specifications. The Contractor is referred to throughout the contract documents as if of a singular number and masculine gender.

c. Subcontractor: A person, firm, or corporation supplying labor and materials or labor for work at the site of the project as an agent of the Contractor. No subcontractor will be recognized as such. All persons engaged in the work of construction will be considered as employees of the Contractor.

d. Plans: The approved detail drawings, or exact reproduction thereof, listed in the detail specifications, which show location, character, dimensions and details of the work to be done and which is to be constructed as a part of this contract.

e. Specifications: All written directions, provisions and requirements governing the procedure to be followed in connection with the performance and execution of the work, the quantities and qualities of materials to be used and the method of measurement of the quantities of work.

f. Work: Labor, material, equipment, transportation, or other facilities necessary to complete the contract.

g. The terms approved, directed, satisfactory, accepted, acceptable, proper, required, necessary and or equal, shall be defined as meaning as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary, or equal in the opinion of the engineer.

h. Engineer: Whenever the Engineer is referred to it is meant to mean Engineering-Science, Inc., 3260½ Rosecrans Street, San Diego, California.

i. Inspector: The inspector or inspectors shall be the agent or agents of Engineering-Science, Inc., 3260½ Rosecrans Street, San Diego, California, limited in each case to the particular duties entrusted to him or them.

j. Change Order: A written order issued by the Engineer ordering the Contractor to make changes in the work or to perform extra work.

k. Notice of Award: A directive issued by the Owner notifying the Bidder that his proposal for the work contemplated has been accepted.

l. Notice to Proceed: A directive issued by the Engineer authorizing the Contractor to start the work or improvements required in the contract.

m. Surety: The word "surety" refers to the person, firm or corporation with whom the Contractor joins in assuming the liability for their performance of the contract in accordance with the plans and specifications by issuing the bonds required by law.

n. Owner: The City of Bishop, Inyo County, California, Party of the First Part of this contract, or duly authorized agent of the Owner.

GC-02. Abbreviations. The abbreviations used in the plans and specifications are abbreviations, the meanings of which are established by general usage throughout the industry, those shown on the Standard Symbols of the plans, and those defined hereinafter.

GC-03. Supplementary Specifications. Wherever reference is made within these documents to certain standard specifications the reference shall be construed to mean the standards, with all subsequent amendments, changes, or additions as thereafter adopted and published that are in effect at the date of approval of the plans and specifications.

AASHO -- American Association of State Highway Officials

ASTM -- American Society for Testing Materials

AWWA -- American Water Works Association

ASME -- American Society of Mechanical Engineers

NEMA -- National Electrical Manufacturers Associations

GC-04. Subcontractors and Contract Agreement. No subcontractor will be recognized as such, and all persons engaged by the Contractor for the furnishing of labor, materials, equipment, or any one or more of them, will be considered as employees of the Contractor, except regarding insurance as provided in paragraph GC-13-e hereinafter.

Subcontractors may be permitted to such extent as shall be shown to be necessary or definitely advantageous to the principal Contractor in the prosecution of the work, and in the opinion of the Engineer without injury to the interests of the Owner. In general, it is the intention that not more than twenty-five (25) percent of the work shall be subcontracted. The listing of more than twenty-five (25) percent may cause a rejection of the bid, if in the opinion of the Owner such extensive subcontracting is undesirable. The Sub-contract shall contain a reference to the agreement between the Owner and the principal Contractor; and the terms of the agreement and all parts thereof shall be made a part of such subcontract insofar as applicable to the work covered thereby. All work and materials furnished by the subcontractor shall be guaranteed by the Contractor and the Owner will hold the Contractor responsible therefor.

GC-05. Testing and Rejection.

a. Operational and Field Testing. After all construction is complete and before acceptance, the contractor shall perform field tests as called for in the Technical Provisions. The Contractor shall demonstrate to the Owner the operation of the facilities for proper sequence of operation and satisfactory performance of the individual components. Any improper operation of the system or any improper, neglected or faulty construction shall be repaired or corrected to the satisfaction of the Engineer. The Contractor shall make such changes, adjustments or replacement of equipment as may be required to make same comply with the specifications, or replace any defective parts or material.

b. Tests and Samples. Materials requiring tests are so specified in the Technical Provisions. Other samples may be tested, but only at the discretion of the Engineer. All samples for testing will be selected by the Engineer from material to be utilized in the project and all tests will be under the supervision of, as directed by, and at such points as may be convenient to the Engineer.

Material requiring testing shall be furnished in sufficient time before intended use so as to allow for testing. No materials represented by tests may be used prior to receipt of written approval of said materials. Samples that are of value after testing shall remain the property of the Contractor.

c. Defective Work or Materials. The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his contract, and defective work shall be made good, and unsuitable materials may be rejected, notwithstanding that such work and materials have been previously overlooked by the Engineer and accepted. If the work, or any part thereof, shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good such defect, without additional compensation, in a manner satisfactory to the Engineer.

Should it be considered necessary or advisable for the Owner at any time before final acceptance of the work to make an examination of work already completed by removing or exposing the work, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to fault of the Contractor or any of his subcontractors, he shall defray all the expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of this Contract, the additional cost of labor and material necessarily involved in the examination and replacement, plus fifteen (15) percent shall be allowed the Contractor.

All costs for retesting and reinspection which are necessitated by defective materials and/or workmanship shall be at the sole expense of the Contractor.

GC-06. Performance of Work. The work shall be commenced within fifteen (15) calendar days from date of execution of contract and shall be completed by the Contractor within the number of calendar days stipulated in the Instructions to Bidders from the date of execution of the contract. If the work is not completed in accordance with the foregoing, the Owner shall have the right to extend the time for completion if it determines such extension to be in the best interests of the Owner. In case the Owner decides to extend the time limit for the completion of the work, it shall have the further right to charge the Contractor, his executors, administrators, heirs, assigns or sureties, all or any part as the Owner may deem proper, of the actual costs of engineering inspection, supervision, incidental and other overhead expenses, that are directly chargeable to the Contract and that accrue during the period of such extension, and to deduct the amount thereof from the final payment for the work. However, the cost of the final survey and the preparation of the final estimate will not be included in such charges.

If the work is not completed by the Contractor in the time specified, or within any period of extension as above authorized, it is understood that the Owner will suffer damage and it being impractical and infeasible to determine the amount of actual damage, it is agreed that the Contractor shall pay to the Owner as fixed and liquidated damages

and not as a penalty, the sum specified in the Special Conditions for each calendar day of delay until the work is completed and accepted and the Contractor and his surety shall be liable for the amount thereof, provided that the Contractor shall not be charged liquidated damages because of any delays in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor (including, but not restricted to, acts of God or of the public enemy, acts of the Government, acts of the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather). The Contractor shall, within ten (10) days from the beginning of any such delay, notify the Engineer in writing of the cause of the delay; whereupon the Owner shall ascertain the facts and the extent of the delay and extend the time for completing the work when in its judgement the findings of fact justify such an extension; and its findings of fact thereby shall be final and conclusive on the parties hereto.

The Contractor must ascertain to his own satisfaction the scope of the project and the nature of any other contracts that have been or may be awarded by the Owner in the prosecution of the project to the end that the Contractor may perform the contract in the light of such other contracts, if any. Nothing herein contained shall be interpreted as granting to the Contractor exclusive occupancy of the site of the project. The Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the project. If the performance of any contract for the project is likely to be interfered with by the simultaneous execution of some other contract or contracts, the Owner shall decide which Contractor may proceed. The Owner shall not be responsible for any damages suffered or extra costs incurred by the Contractor resulting directly, or indirectly, from the award of performance or attempted performance of any other contract or contracts on the project, or caused by any decision or omission of the Owner respecting the order of precedence in the performance of the contracts awarded for completion of the project.

GC-07. Federal Hindrance. In entering into this contract, it is clearly understood by all parties hereto that conditions may subsequently arise resulting from, connected with, or growing out of any war, in which the United States may be engaged, or any national emergency or condition created directly or indirectly by or for national defense, and which are entirely beyond the control of either party, that may hinder, delay or render impossible the performance of this contract in accordance with its terms and conditions.

It is therefore mutually understood and agreed, anything herein contained to the contrary notwithstanding, that in the event the Contractor shall be prevented from performing the contract or any part thereof by reasons of the conditions above stated, the following procedure shall govern.

The Contractor shall in writing notify the Owner of his inability to perform, stating in full the reason therefor and the probable durations of such inability. If required, he shall also submit proof or evidence in support of his claim or inability to perform.

If it shall appear to the satisfaction of the Owner that the cause of inability to perform arose after the contract was entered into and is beyond the control of the Contractor, the Owner may:

a. If lawfully within its power, remove the cause which prevents performance; or

b. Suspend this contract until the cause of inability to perform is removed; or

c. With the consent of the Contractor, renegotiate or amend this contract by extending the time of performance or by making changes in the character of the work, or in the materials or equipment required in order to enable performance of the contract; or

d. Waive performance of that part of the Contract which is impossible, or supply substitute materials for those unavailable. Where this remedy is resorted to, the payment due the Contractor shall be diminished to the extent of the work not required to be supplied, based so far as is practicable upon unit prices bid.

If none of the foregoing procedures are adopted by the Owner within thirty (30) days after the Owner is satisfied and so finds that the Contractor is unable to perform for the reasons above stated, then either party hereto may, without incurring any liability, elect to declare this contract terminated upon the ground of impossibility of performance. Upon such termination, the Contractor shall be entitled to proportionate compensation at the contract price for such portion of the contract as may have been performed.

GC-08. Suspension of Contract. If the work to be done under the Contract shall be abandoned by the Contractor, or if the Contractor shall make a general assignment for the benefit of his creditors or be adjudicated a bankrupt, or a receiver of his property or business be appointed by a court of competent jurisdiction, or if this contract shall be assigned by him otherwise than as hereinbefore specified, or if at any time the Engineer shall be of the opinion that the performance of the contract is unnecessarily or unreasonably delayed, or that the Contractor is willfully violating any of the conditions or covenants of the contract or of the specifications, or is executing same in bad faith or not in accordance with the terms thereof, or if the work is not fully completed within the time named in the contract for its completion, or approved extensions of such time, the Owner, may by written notice instruct the Contractor to discontinue all work, or any part thereof, under the contract.

When such written notice is served upon the Contractor, he shall immediately discontinue the work, or such part thereof as is covered by the notice, and shall not resume the same except by written instruction from the Owner. In any such case the Owner may take charge of the work and complete it by whatever method he deems expedient. In doing so, the Owner may take possession of any materials, plant, tools, equipment, supplies, and property of every kind provided by the Contractor for the purpose of his work. The Contractor shall not be entitled to receive any payments after the date of said notice. If upon completion of the work the total cost to the Owner, in connection therewith from the date of said notice to the date of completion, exceeds the amount which would have been payable under the Contract if the same had been completed by the Contractor, then the difference shall be paid to the Contractor in the same manner as the final payment under the Contract.

The Owner also reserves the right of suspending the whole or any part of the work if the Engineer shall deem it for the interest of the Owner to do so and, unless otherwise provided in the Technical Provisions, the Contractor shall have no claim for damages or additional compensation on account of such suspension but will be entitled to so much additional time wherein to complete the contract as determined in accordance with paragraph GC-06 hereinbefore.

GC-09. Protests. If the Contractor considers any work demanded of him to be outside the requirements of the contract, or if he considers any instructions, ruling or decision of the Owner or Engineer, or of any Inspector, to be unfair, he shall within ten days after any such demand is made, or instruction, ruling, or decision is given, file a written protest with the Engineer, stating clearly and in detail his objections and the reasons therefore. Except for such protests and objections as are made of record in the manner and within the time stated herein, the Contractor shall be deemed to have waived and does hereby waive all grounds for protests or objections to such demands, instruction, ruling, or decision of the Engineer.

GC-10. Right of Way. The right of way, easements, and land for the improvement will be provided by the Owner. The Contractor shall obtain consent from the property owners and shall make his own arrangements and pay all expenses for additional area required by him outside the limits of the right of way.

GC-11. Loss or Damage. The Owner shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof, or to any of the materials or other things used in performing the work, or for injury to any person or persons, either workmen or the public, or for damage to any property for any cause which might have been prevented by the Contractor. Against all these injuries or damages to persons and property, the Contractor shall properly guard. The Contractor shall be responsible for any liability

imposed by law for any damage to any person or property resulting from defects or obstructions, or from any cause whatsoever during the process of the work, or at any time before final acceptance, and shall indemnify and save harmless the Owner from all suits or actions of every description brought for, or on account of, any injuries or damages received or sustained by any person or persons by reason of the construction of the work, or any negligence in guarding the same of improper materials used in its construction, or of any act of omission of the Contractor.

GC-12. Protection of Property and Utilities.

a. Protection of Property. The Contractor shall conduct his operation in such a manner as to avoid injury or damage to adjacent property, improvements, or facilities.

Buildings, trees, ground cover, and shrubbery that are not designated for removal, pole lines, fences, guard rail, guide posts, culvert and project markers, signs, structures, conduits, pipelines, and other improvements within or adjacent to the street or right of way shall be protected from injury or damage. The Contractor shall provide and install suitable safeguards to protect such objects from injury or damage, which objects if injured or damaged, by reason of the Contractor's operations, shall be replaced or restored to a condition as good as when entered upon the work, or as required by the specifications.

The Contractor shall be responsible for all damage to streets, roads, highways, ditches, embankments, bridges, culverts or other public or private property, which may be caused by transporting equipment, materials, or men to or from the work. The Contractor shall make satisfactory and acceptable arrangements with the property owner over the damaged property concerning its repair or replacement.

b. Protection of Utilities and Substructures. A diligent search of known utility records has been made in the endeavor to indicate on the drawings the nature and location of all utilities which exist within the limits of the work. However, the accuracy of completeness of the utilities indicated on the drawings is not guaranteed. Utility structures and/or service connections to adjacent property may or may not be shown on the drawings.

It shall be the responsibility of the Contractor, before commencing any excavation, to contact all possible owners of utilities within the work area and to ascertain from records or otherwise, the existence, position and ownership of all utilities, utility structures and service connections. No error or omission regarding said utilities shall be construed to relieve the Contractor from his responsibility in protecting all such facilities.

Unless otherwise indicated on the plans or in these specifications or unless otherwise cared for by the Owner thereof,

all water, gas, oil, or irrigation lines; lighting power, or telephone conduits; sewer lines, house connection lines; sprinkling systems, and other subsurface structures of any nature along the work shall be maintained by the Contractor at his own expense and shall not be disturbed, disconnected, or damaged by him during the progress of the work. Should the Contractor in the performance of the work disturb, disconnect, or damage any of the above, all expenses of whatever nature arising from such disturbance, or the replacement or repair thereof shall be borne by the Contractor.

The Contractor shall not disturb any existing private sanitary facilities. Unless otherwise indicated on the plans, all private sanitary facilities shall be maintained by the Contractor and shall not be disturbed or disconnected by him. The Contractor shall install temporary pipes of adequate size to carry off sewage from any private sewer facilities cut off by construction. Connections to temporary pipes shall be made immediately by the Contractor upon cutting of the existing facility. No sewage shall be allowed to flow from any severed facility upon the ground surface or in the trench excavation. Pipe used in temporary sewers may be clay, metal, concrete or composition. Upon completion of work the Contractor shall replace all severed connections and restore to operation order the existing sanitary facilities.

No valve or other control of the water system shall be operated by the Contractor without approval of the Engineer and all customers affected by such operation shall be notified by the Contractor at least one hour before the operation and advise of the probable time when service will be restored.

The Contractor shall not draw any water from a fire hydrant for use on the work, without first obtaining permission from the Owner.

In case it should be necessary to move or temporarily maintain the property of any public utility or other property, the cost of which because of the terms of any franchise or for any other reason must be borne by the Owner thereof, such Owner will, upon proper application by the Contractor, be notified by the Engineer to move or temporarily maintain such property within a specified reasonable time, and the Contractor shall not interfere with said property until after the expiration of the time specified.

The right is reserved to the Owner, to governmental agencies, and to owners of public utilities and franchises to enter upon any street, alley, right of way, or easement for the purpose of maintaining or of making necessary repairs or changes in property made necessary by the work. The Owner reserves the right during the progress of the work, upon determination of the actual position of the existing utilities and utility structures, to make changes in the grade or alignment of the

sewer pipelines, wherever by so doing, the necessity for relocation of such utility or structure will be avoided. Such changes will be ordered in writing by the Engineer.

GC-13. Observance of Laws and Regulations. The address given in the Contractor's proposal on which the contract is founded is hereby designated as the place to which all notices, letters, and other communications to the Contractor shall be mailed or delivered, except that said address may be changed by the Contractor by so notifying the Engineer and Owner in writing. This shall not be construed to preclude the service of any notice, letter, or other communication upon the Contractor personally.

b. Domestic Articles, Materials, and Supplies. In the performance of this contract, or any subcontract hereunder, there shall be used only unmanufactured materials produced in the United States and only manufactured materials manufactured in the United States substantially all from materials produced in the United States, all as set forth, defined and provided in Sections 4300 to 4305, both inclusive, of the Government Code of the State of California. Preference will also be given to supplies grown, manufactured, or produced in the State of California, as set forth, defined and provided in Sections 4330 to 4334, both inclusive, in said Government Code.

c. Patents or Copyrights. The Contractor shall hold and save the Owner harmless from liability of any nature and kind including costs and expenses, for or on account of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, manufactured, furnished, or used by him in the performance of this contract, including their use by the Owner unless otherwise specifically stipulated in the Contract.

d. Prevailing Rates of Per Diem Wages. The Owner has ascertained the general prevailing rate of per diem wages in the locality in which the work is to be performed for each craft or type of workman needed to execute the contract and has specified same in the Contract Documents attached hereto. The Contractor and all subcontractors shall comply with all requirements and provisions of Section 1775 and 1776 of the California Labor Code. The Contractor shall forfeit as a penalty to the Owner \$25.00 for each calendar day or portion thereof, for each workman paid less than stipulated prevailing rates for any work done under the contract by him, or by any subcontractor under him, in violation of the provisions of the California Labor Code.

Subject to the provisions of Sections 1810 to 1817, both inclusive, of the California Labor Code, the time of service of any laborer, workman, or mechanic employed on the work shall be limited and restricted to eight hours during any one calendar day, except as otherwise provided in said sections, and the contractor shall forfeit, as a penalty to the Owner \$25.00 for each laborer, workman, or mechanic employed in the execution of this contract by him or any subcontractor under him, for each calendar day during which such laborer, workman, or machanic is required or permitted to labor more than eight hours in violation of the provisions of the California Labor Code.

e. Insurance. No work shall be done under this Contract unless there is in effect insurance required under this section, and such insurance has been approved by the Owner: nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all insurance required of the Subcontractor has been so obtained and approved. The Contractor shall maintain, or cause to be maintained, adequate workman's compensation insurance under the laws of the State of California, and shall provide or cause to be provided employer's general liability insurance for the benefit of his employees and the employees of any Subcontractor under him not protected by such compensation laws.

The Contractor shall take out and shall furnish satisfactory proof by certificate that he has taken out public liability and property damage insurance with insurance carriers satisfactory to the Owner and in such form as shall be satisfactory to the Owner to protect said Contractor against loss from liability imposed by law from damages on account of bodily injury, including death resulting therefrom, suffered or alleged to have been suffered by any person or persons, resulting directly or indirectly from the performance or execution of this contract or any subcontract thereunder, and also to protect said Contractor against loss from liability imposed by law for damage to any property, caused directly or indirectly by the performance or execution of this contract or any subcontract thereunder, which insurance shall also cover accidents arising out of the use and operation of automobiles and trucks.

All said public liability and property damage insurance shall be maintained by the Contractor in full force and effect during the entire period of performance under this contract, the amounts of coverage of said insurance shall be not less than the following:

Public Liability	\$500,000 for one person injured in one accident.
	\$1,000,000 for more than one person injured in one accident.
Property Damage	\$100,000/\$500,000 limits.

Said policies shall have a non-cancellation clause providing that ten (10) days written notice shall be given the said Owner prior to such cancellation.

If the Contractor fails to maintain such insurance, the owner may take out such public liability insurance to cover any damage which said Owner may be liable to pay through any of the operations under this contract, and deduct and retain the amount of the premiums for such insurance from any sums under the contract.

Nothing herein contained shall be construed as limiting in any way the extent to which the Contractor may be held responsible for payment of damages to persons or property resulting from his operations or the operations of any subcontractor under him.

The Contractor shall maintain or cause to be maintained fire insurance on all work subject to loss or damage by fire. The amount of fire insurance shall be sufficient to protect against such loss or damage in full until the work is accepted by the Owner. Certificates of such insurance shall be furnished before starting work for submittal to the Department of the Interior.

The Contractor shall indemnify and save harmless the Owner from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought, or recovered against him by reason of any act, or omission, of the said Contractor, his agents or employees in the execution of the work. The Contractor shall maintain and pay for such insurance as will protect the Owner from its contingent liability under the Contract and a copy of such insurance policy shall be deposited with the Owner. The Owner shall be named as co-insured on all policies.

f. Compliance with Laws and Regulations. The Contractor shall keep himself informed of all laws, ordinances, and regulations in any manner affecting those employed on the work, or the materials used in the work, or in any way affecting the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. He shall at all times himself observe and comply with, and shall require all his agents, employees, and subcontractors to observe and comply with all such applicable laws, ordinances, regulations, orders, and decrees in effect or which may become effective before completion of this contract; and shall protect and indemnify the Owner against any claim of liability arising from or based upon the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees, or his subcontractors.

Unless otherwise explicitly provided in these specifications, all permits, and licenses necessary to the prosecution of the work shall be secured by the Contractor at his own expense, and he shall pay all taxes properly assessed against his equipment or property used in connection with the work.

GC-14. Construction Facilities.

a. Water. The Contractor shall provide and maintain at his own expense an adequate supply of water of quality suitable for the required construction and domestic use.

b. Power. The Contractor shall make his own arrangements for power, and shall pay for all power, and installation thereof, required for construction purposes.

c. Telephone. Any telephone facilities which the Contractor may install in connection with the work shall be made available for use of the Engineer or his representatives without charge, except that any toll charges incurred by the Engineer shall be paid by the Engineer.

d. Storage. The Contractor shall be responsible for the storage of all materials, equipment and so on, which are used in the work. All materials, equipment and articles at the site shall be adequately housed by the Contractor or otherwise protected by him against deterioration and damage. If any materials stored at the site or any partially completed structure are not adequately protected by the Contractor, the material or the partially completed structure may be kept protected by the Owner at the expense of the Contractor. All costs incurred through the failure to provide protection shall be borne by the Contractor during the course of the work.

e. Transportation Facilities. The Contractor shall investigate the availability of transportation facilities and shall make all arrangements necessary for the delivery of materials to be used on the work. The Contractor shall make his own investigation on the condition of available public roads, access rights of way, and of restrictions, bridge load limits and other limitations affecting transportation and ingress and egress at the site of work.

f. Dust Control. The Contractor shall conduct his operations and activities in such a manner that shall provide control as follows:

1. No fuel shall be used nor shall any operation be conducted which shall emit into the atmosphere any smoke which is defined as equal to Ringelmann No. 2, or darker.
2. No operation shall be conducted which will emit into the atmosphere any flying dust or dirt which is noticeable to humans or which might constitute a nuisance.

g. Sanitation. The Contractor shall provide temporary chemical toilet facilities for the use of all workmen. The toilet building shall be maintained in a sanitary condition at all times and at the completion of construction shall be removed from the site. Pit-types privies shall not be used.

The Contractor shall supply pure, cool drinking water with individual drinking cups or a sanitary bubbler fountain.

h. Safety Measures and Public Convenience. The Contractor shall provide for the protection of all persons and property at all times. The Contractor shall comply with the recommendations for safe construction methods from the "Manual of Accident Prevention in Construction", published by the Associated General Contractors of America, Inc., to the extent that such provisions do not conflict with the applicable laws. Machinery and equipment shall be guarded in accordance with the requirements of the "Manual of Accident Prevention in Construction", published by the associated General Contractors of America, Inc., to the extent that such provisions do not conflict with the applicable laws.

The Contractor shall take all necessary measures to protect the work and prevent accidents during the construction. He shall provide and maintain sufficient night lights, barricades, guards, temporary sidewalks, temporary bridges, danger signals, watchmen and necessary appliances and safeguards to properly safeguard life and property. He shall also protect all excavations, equipment and materials with barricades and danger signals so that the public will not be endangered.

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to traffic, and he shall have under construction no greater amount of work than he can handle properly with due regard to the rights of the public. Where existing streets are not available ad detours, all traffic shall be permitted to pass through the work with as little delay and inconvenience as possible, unless otherwise authorized by the Engineer.

The Contractor shall be responsible for all damage or injury which may be caused on any property by trespass by the Contractor or his employees in the course of their employment, whether the said trespass was committed with or without the consent or knowledge of the Contractor.

i. Representatives for Emergencies. The Contractor shall file with the Engineer, the names, addresses, and telephone numbers of representatives who can be contacted, at any time, in case of emergency. The representatives must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions on short notice.

GC-15. Superintendence and Labor Competency. Whenever the Contractor is not present on any part of the work where it may be desired to give direction, orders given by the Engineer shall be received and obeyed by the superintendent or foreman as authorized representative who may be in charge of the work. Any order given by the Engineer, not otherwise required to be in writing by the specification, will, on request of the Contractor, be given or confirmed in writing. An Authorized representative of the Contractor shall be at the site of the work during working hours.

All superintendents and foremen shall be English-speaking. Any superintendent, foreman, laborer, or other person employed on the work by the Contractor, who fails or refuses to perform the work in the manner specified herein, shall be discharged immediately and such person shall not again be employed on the work. When required in writing by the Engineer, the Contractor or any Subcontractor shall discharge any person who is, in the opinion of the Engineer, incompetent, unfaithful, disorderly, or otherwise unsatisfactory. Such discharge shall not be the basis of any claim for compensation or damages against the Owner.

GC-16. Work Site Maintenance.

a. Access to Property Adjacent Work. Convenience of abutting owners along the street shall be provided for as far as practicable. Convenient access to driveways, houses and buildings adjoining the work shall be maintained and temporary approaches to intersection streets and alleys shall be provided and kept in good condition. When a section of surfacing, pavement, or a structure has been completed, it shall be opened for use by traffic at the request of the Engineer. In order that unnecessary delay to the traveling public may be avoided, the Contractor, when so ordered by the Engineer, shall provide competent flagmen whose sole duty shall consist of directing traffic either through or around the work.

b. Water Hydrants and Utility Valves. The Contractor shall not prevent the free access to water valves, water hydrants, or gas valves.

c. Rights of Access. The Contractor shall at all times provide proper facilities for access and inspection of the work by the Engineer, his assistants, inspectors, agents and representatives of public agencies having jurisdiction.

GC-17. Use of Explosives. The Contractor shall keep himself informed of all state and city laws, ordinances, and regulations governing the transportation, storage, and use of explosives. The Contractor shall use the utmost care not to endanger life and property. The Contractor shall be responsible for any and all damage resulting from the use of explosives. No blasting shall be done which will damage subsurface conduits or structures: in no case shall blasting be done within ten feet of any subsurface installation without the prior approval of the Owner of the subsurface installation.

GC-18. Schedule of Operations. At the time of execution of the contract, the Contractor shall submit to the Engineer on a chart form, a schedule of operations giving the estimated date that each part or branch of the work will be started and completed. Schedules shall conform to the work and time set forth in the agreement and shall be subject to the approval and/or modification by the Engineer.

When in the judgment of the Engineer, it becomes necessary to accelerate or change the work the Contractor, when ordered, shall concentrate his forces at such other point or points as directed and execute such portions of his work as may be required to enable others to hasten and properly engage and carry on their work.

GC-19. Contractor's Breakdown Estimate. The Contractor shall prepare, and submit to the Engineer for approval, a breakdown estimate covering each lump sum item. The sum of the items listed in the breakdown estimate shall equal the contract lump sum price or prices. An unbalanced breakdown estimate, providing for overpayment of the Contractor on items of work which would be performed first, will not be accepted. The breakdown estimate shall be approved by the Engineer before any partial payment estimate is prepared.

GC-20. Drawings and Data to be furnished by the Contractor. Shop drawings shall be submitted by the Contractor to the Engineer as called for in the specifications, including but not restricted to, reinforcing steel placement and bending diagrams, shop drawings for structural steel and miscellaneous iron work, work drawings for mechanical equipment, architectural items, and electrical work and drawings for other work for which the Engineer's approval is required. Performance curves are to be furnished for all pumps showing the characteristic efficiency and horsepower curves with the required operating point as guaranteed, so marked.

A minimum of six (6) copies of all drawings shall be submitted to the Engineer for approval, three (3) of which will be retained by the Engineer. The remaining drawings, approved or corrected will be returned to the Contractor.

Approval of shop and working drawings shall indicate only that such drawings generally express the intent of the contract documents and shall not be construed as a complete check. Approval of drawings shall not relieve the Contractor of the responsibility of furnishing all materials and work required by and conforming to the plans and specifications. Approval of shop drawings shall in addition not relieve the Contractor of the responsibility of accuracy of dimensions; provision of adequate connections and the proper fitting of the work in the completed construction.

Prior to submittal the Contractor shall check the shop drawings prepared by subcontractors for accuracy and completeness, especially that the relation to adjoining work is accurately shown. Approval of shop drawings does not authorize any substitution of material or other departure from the requirements of the Contract Documents. Requests for such changes shall be made the subject of separate correspondence. Shop drawings shall be submitted at such time as will permit the Engineer not less than ten (10) days for checking.

Upon completion of the work and prior to final approval the Contractor shall file with the Owner two (2) complete sets of drawings and instructions required for maintenance of all items of equipment furnished. These shall include instructions for lubrication, repair and servicing, parts lists and all other pertinent information available from the equipment manufacturers.

GC-21. Final Conditions of Work. Before application is made for the owner to accept the work, all items of work shall be complete, ready to operate and in a clean condition. All trash, debris, unused building material and temporary structures shall have been removed from the site of the work. Tools and construction machinery not needed for repair and adjustment consequent to operational tests shall not be on the site. The walkways, parking areas and roadways shall be completely swept and broomed!

GC-22. General Supervision. The Engineer shall have the general supervision and direction of the work. He has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the contract. He shall have authority to reject any work or materials which do not conform to the contract documents, to direct the application of forces to such portions of the work as in his judgment is required, to order the force increased or diminished, to direct the sequence of the work, and to decide questions which arise in the execution of the work.

GC-23. Lines and Grades, Setting Stakes. The Contractor shall give two working days notice in writing when he will require the services of the Engineer for laying out any portion of the work. Elevations shown for the various parts of the work refer to the Datum Bench Mark, which will be established by the Engineer near the site. The engineer shall establish the necessary base lines and grades at the surface of the ground and at convenient locations for the construction of the work. The baseline for pipe line construction will be parallel with and off-set from the proposed pipe line. From the established base lines and grades the Contractor shall extend the necessary lines and grades for construction of the work and shall be responsible for the correctness of same. The Contractor

shall preserve all stakes set for lines, grades, or measurements of the work in their proper places until authorized to move them by the Engineer. Any expense incurred in replacing said stakes which the Contractor may have failed to preserve shall be borne by the Contractor.

Three consecutive points set on the same slope shall be used together in order that any variation from a straight grade can be detected. If any such variation is found, it shall be reported to the Engineer. In the absence of such report, the Contractor shall be responsible for any error in the grade of the finished work.

Prior to any request for construction stakes, the Contractor shall have all utility lines located and marked in the field and shall have all rights of way cleared and graded and ready for construction activities.

GC-24. Inspection. The Owner shall provide inspection for all work to be performed under the Contract. All materials and work shall be performed only in the presence of the Engineer or his authorized inspector and any work done in the absence of said Engineer or authorized inspector shall be subject to rejection. The Contractor shall notify the Owner and Engineer two working days in advance of any work to be done, in order that inspection services may be provided.

GC-25. Materials and Workmanship. Unless otherwise specified all material incorporated in the permanent work shall be new. Materials not otherwise designated by detailed specifications shall be of the best commercial quality and suitable for the purpose intended.

All workmanship shall be in conformance with the best trade practices. Particular attention shall be given to the appearance of exposed work. Any work or workmanship not conforming to the best practices shall be subject to rejection.

GC-26. Guarantees. The Contractor shall guarantee all parts of the work against defective materials or workmanship furnished by the Contractor for a period of one (1) year from the date of completion of the contract.

GC-27. Attorney Fees. If an action is commenced in a court of competent jurisdiction in which the parties hereto are parties, and if as a result of such action the Owner is afforded any relief it shall be entitled to its reasonable attorney fees as fixed by the Court.

SPECIAL CONDITIONS

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S E C T I O N   S C  
SPECIAL CONDITIONS

SC-01. Scope of the Work. The work to be done consists of furnishing all labor, materials, tools, and equipment necessary for or incidental to the construction, development and testing of Well Number 4 with all appurtenant facilities in accordance with the plans and specification.

All work, during its progress, and upon completion, shall conform to the lines, elevations, and grades as shown on said plans. The Contractor shall complete the proposed work in every detail as specified. Should any detail or details be omitted from the plans, then it shall be the responsibility of the Contractor to furnish and install such detail, so that upon completion, the proposed work will be acceptable and ready for use.

The work to be done is located in the City of Bishop, Inyo County, California.

SC-02. Time of Performance. The work shall be commenced within fifteen (15) calendar days from the date of execution of the contract and shall be diligently prosecuted until completion. The work shall be completed within the number of calendar days stipulated in the Instructions to Bidders. The bidder's attention is directed to Sub-Section GC-06. If the work is not completed within the time specified, the sum referenced in sub-section GC-06 is hereby stipulated to be Twenty dollars (\$20.00) for each calendar day of delay for each schedule or combination of schedules.

SC-03. Payments and Extra Work. On or before the fifteenth (15th) day of each month and after written approval of the Engineer, there shall be paid to the Contractor a sum equal to 90 percent (90%) of the work performed and of unused materials stored on the site up to the last day of the previous month, less the aggregate of previous payments. The monthly payments shall be made only on the basis of monthly estimates which shall be prepared by the Contractor on a form approved by the Engineer before the 25th day of the month preceding the month during which the payment is to be made. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release the Contractor or any bondsman from damages arising from such work or from enforcing each and every provision of the contract; and the City shall have the right subsequently to correct any error made in any estimate for payment. The Contractor shall not be entitled to have any payment estimates processed or be entitled to have any payment made for work performed so long as any lawful or proper direction concerning the work or any portion thereof given by the City or the Engineer shall remain uncomplished with.

Payments for materials stored on the site shall be based only upon the actual cost of such materials to the Contractor and shall not include any overhead or profit to the Contractor.

In addition to the amount which the City may retain under the above paragraph the City may withhold a sufficient amount or amounts of any payment or payments otherwise due to the Contractor as in its judgment may be necessary to cover (a) payments which may be past due and payable for just claims against the Contractor or any subcontractor for labor or materials furnished in or about the performance of the work on the Project under the contract, (b) for defective work not corrected, and (c) for failure of the Contractor to make proper payments to any of his subcontractors.

The City may apply such withheld amount or amounts to the payment of such claims, in its discretion. In so doing the City shall be deemed the agent of the Contractor and any payments so made by the City shall be considered as a payment made under the contract by the City to the Contractor and the City shall not be liable to the Contractor for such payment made in good faith. Such payment may be made without prior judicial determination of the claim or claims. The City will render to the Contractor a proper accounting of such funds disbursed on behalf of the Contractor.

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the City a construction commencement and completion program schedule of each of the various subdivisions of work required under the contract and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be approved by the Engineer (a) a detailed estimate giving a complete breakdown of the contract price, and (b) periodical itemized estimates of work done for the purpose of making partial payments thereon. The values employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

The City, upon proper action by its Governing Body, may require changes in, additions to, or deductions from the work to be performed or materials to be furnished pursuant to the provisions of the contract. Adjustments, if any, in the amounts to be paid to the Contractor by reason of any change, addition, or deduction shall be determined by one or more of the following methods:

- a. By an acceptable lump-sum proposal from the Contractor.
- b. By unit prices contained in the Contractor's original bid and incorporated in the Contract Documents or fixed by subsequent agreement between the City and the Contractor.

No extra work shall be performed or change made except pursuant to a written order from the City stating that the extra work or change is authorized, and no claim for an addition to the contract sum shall be valid unless so ordered; provided, however, that nothing in these specifications shall excuse the Contractor from proceeding with the prosecution of the work so changed. The Contractor shall, when required by the City, furnish an itemized breakdown of the quantities and prices used in computing the value of any change that might be ordered.

At the expiration of thirty-five (35) days after the final acceptance and filing of a Notice of Completion, the Contractor will be paid the remainder of the total contract price after deducting any sums which may be legally retained under this contract.

SC-04. Measurement and Payment. All measurement and payment will be in accordance with the Technical Provisions.

SC-05. Authority of Engineer. Whenever in these specifications or in other contract documents where these specifications govern, the term Engineer shall mean authorized personnel of Engineering-Science, Inc. 3260½ Rosecrans Street, San Diego, California, (Telephone: (714) 224-3618.

The work shall be done under the direction of the Engineer, and the materials used shall comply with these specifications and be to the satisfaction of the Engineer. The Engineer shall have authority to stop the work, whenever such stoppage may be necessary to insure the proper execution of the contract. He shall have authority to reject any work or materials which do not conform to the contract documents, to direct the application of forces to such portions of the work as in his judgment is required, to order the force increased or diminished, to direct the sequence of the work, and to decide questions which arise in the execution of the work. All work under this contract shall be done under the direction and to the satisfaction of the Engineer.

SC-06. Quality of Materials and Equipment. Whenever a material or article is specified or described on the plans by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific items mentioned shall be understood as establishing the type, function, and quality desired. The base bid must be based on the use of these materials or articles. Other manufacturer's products of comparable quality and suitable for the intended use will be considered. Such items shall be submitted to the Engineer for approval.

All equipment, materials, and articles incorporated in the work shall be new and unused. The Contractor shall provide proper storage facilities and exercise such measures as will insure the preservation of the specified quality and fitness of all materials and equipment. Materials not conforming to the requirements of the specifications shall be rejected and shall be immediately removed from the site

of the work. Materials used in the work shall be sampled and tested in conformance with the specifications. Samples furnished for sampling shall be representative of the material to be used.

SC-07. Access to Work. The City, its inspectors, agents, and other employees, shall at all times and for any purpose have access to the work and the premises used by the Contractor, and the Contractor shall provide safe and proper facilities therefor. Furthermore, the City, its inspectors, and agents shall, at all times, have immediate access to all places of manufacture where machinery or materials are being manufactured, produced, or fabricated for use under these specifications, and shall have full facilities for determining that all such machinery or materials are being made strictly in accordance with the specifications and drawings. The Contractor shall, whenever so requested, give the Engineer access to the proper invoices, billings of lading, etc., and shall provide scales and assistance for weighing, or assistance for measuring any of the materials.

SC-08. Shut-Down. Shut down periods for existing facilities shall be kept to a minimum and the Contractor shall schedule his work accordingly. Contractor shall give forty-eight (48) hour advance written notice to the City of his desire for an existing valve to be operated or an existing facility to be shut down or a pipeline drained; and, unless the circumstances at that time make it impractical, City will operate the existing valve, shut down the existing facility or supervise the draining of a line by the Contractor.

No additional compensation will be paid for any work necessary to keep the shut-down periods within the City's requirements nor for any work resulting from faulty operation or leakage through the existing valves. The Contractor shall provide at his own expense equipment, materials and labor whenever required by the City to facilitate the draining of the lines.

SC-09. Estimated Quantities. All estimated quantities stipulated in the Proposal are approximate and are to be used only as a basis for estimating the probable cost of the work, and for the purpose of comparing the proposals submitted for the work. The actual amounts of work done and materials furnished under the unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. The Contractor agrees that he will make no claim for damages, anticipated profits, or otherwise on account of any differences between the amounts of work actually performed and materials actually furnished and the estimated amounts therefor.

TECHNICAL PROVISIONS

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S E C T I O N 1

GENERAL

1-01. Description of the Work. The City of Bishop, California is desirous of developing a domestic water supply well at the site indicated on Drawing 1. The geologic setting of the Bishop Area is such that a layer of tuff containing fluorides in greater than desirable concentrations underlies the entire area. Available geologic information has been analyzed to provide data concerning the approximate depth of the tuff at the well site. Based on this information, the approximate desirable depth for a well at the site has been determined. In the construction of the well it will be necessary to ensure that the well, when completed, will not draw water from the tuff layer.

Well No. 4 shall be drilled near the city limits of Bishop as indicated on Drawing 1 and the work shall be accomplished in accordance with these specifications, including the furnishing of all required plant, labor, materials, and equipment. Well No. 4 shall be drilled by the cable-tool method as described herein.

The Contractor shall be required to furnish a well with a finished minimum inside diameter of 16 inches. Larger diameters shall be acceptable, but the Contractor shall be expected to construct, case, perforate, develop and perform all operations, regardless of the actual diameter at the unit prices bid.

It is expected that the tuff layer will be encountered at a depth of approximately 100 feet. Careful identification and location of strata and sampling of water at various levels will be required in accordance with the technical sections which follow. City will test water samples.

1-02. Beginning and Completion of the Work. The work on Well No. 4 shall be commenced within fifteen (15) calendar days from the date of execution of the contract and shall be completed within 80 calendar days from the date of execution of the contract.

1-03. Contract Drawings. The location of the work, its general nature and extent, and the form and detail of the various features are shown on the following drawings, accompanying and made a part of these specifications:

<u>Sheet No.</u>	<u>Title</u>
1	Vicinity Map and Site Location
2	Plot Plan - Well No. 4 Site
3	Well Details

1-04. Liquidated Damages. The Contractor shall, as provided, pay to the City as fixed, agreed, and liquidated damages for each calendar day's delay in completion of the work beyond the time provided in the Contract for drilling of the individual wells, the amount of twenty dollars (\$20.00)

1-05. Services Furnished by the City and Construction Limitations.

1. The City will furnish the Contractor with all necessary water required during the construction and testing of the well without charge, provided however, that the Contractor shall, at his own expense, provide facilities for conveying the water from the nearest existing fire hydrant or other available source to the points of use.

2. All water used in developing or test pumping of the well shall be suitably disposed of by the Contractor.

3. The Contractor shall, at his own expense, provide electric power and other utilities as required for his operations under the contract.

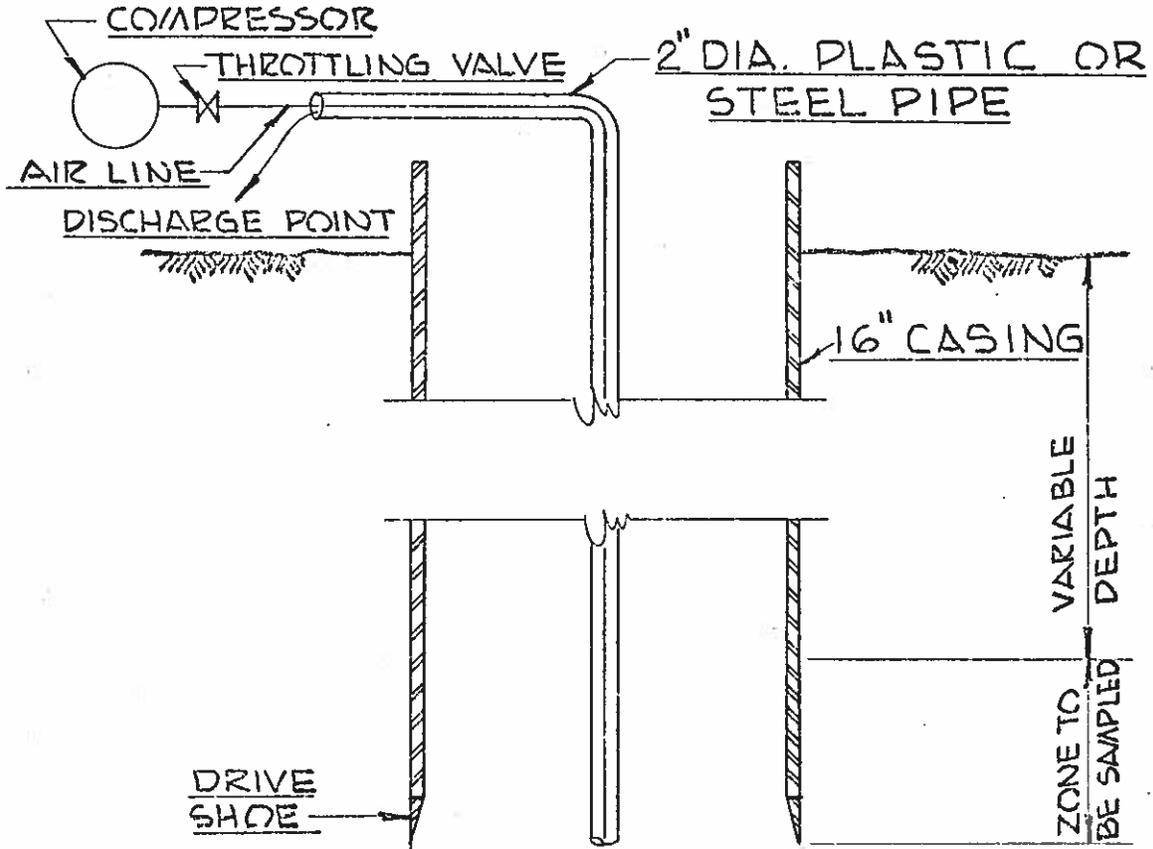
1-06. Explanation of Bid Items. The various depths and casing lengths given are approximate only. The exact depths and lengths will be determined by the Engineer from the drilling log records. Payment for well construction will be based on the unit prices bid adjusted to reflect any changes in the quantities specified with the adjustment based on the bid prices for the Additive and Deductive Items. No extra payments will be made for any deviations made from the bidding sheet unit prices without a duly processed change order.

1-07. Termination of Drilling. The City reserves the right to terminate all drilling and testing at Well Site No. 4 at any time when drilling samples and/or water quality samples indicate that a completed well at this site will be undesirable as a domestic water supply source. In the event of termination prior to completion, the Contractor shall backfill the hole, plug the upper 20 feet with concrete and clean-up the site as directed by the City. Payment for work performed by the Contractor will be based on the prices bid, adjusted to reflect any changes in the quantities specified with the adjustment based on the bid prices for the additive and deductive items.

1-08. Water Quality Testing. The Contractor shall furnish all labor, equipment and materials necessary to obtain samples of formation water at selected depths below ground surface as the well is being drilled, in the manner prescribed below.

A two-inch (2) diameter steel or plastic pipe opened at the bottom and fitted with a convenient discharge device at the top shall be inserted inside the well casing at depths varying from 20 feet below ground surface to 500 feet below ground surface or to the total depth of the well if less than 500 feet. An air line leading from a compressor shall be inserted inside the two-inch (2) diameter steel or plastic pipe so that the discharge point of the air line lies opposite the lower open end of the two-inch (2) diameter pipe. Air shall be pumped through the air line leaving the lower end of the air line forcing water up through the two-inch (2) diameter pipe to the discharge end at the surface. The compressor shall be of sufficient size to discharge at least 10 gpm of water and shall be equipped with a

throttling device so the discharge of water can be varied. The Contractor shall furnish all necessary devices to accurately determine the precise depth of the lower end of the water sampling tube.



S E C T I O N 2

CABLE TOOL METHOD

2-01. Well Casing.

(1) All well casing, including the starter section, shall be fabricated from new steel plate. The steel used shall be manufactured specifically for well casing. The double wall casing shall be fabricated from a high tensile, corrosion resistant steel with the following minimum properties:

Chemical Composition

Element	Limiting Chemical Range - %	Physical Properties
Carbon	0.20 - 0.30	
Manganese	0.85 - 1.15	Yield Strength (psi)-55,000-70,000
Phosphorus	0.05 Max.	Ultimate Strength (psi)-80,000-95,000
Sulphur	0.05 Max.	Elongation (% in 8")-17 -25
Silicon	0.12 Max.	Rockwell "B" Hardness-80 - 90
Copper	0.25 - 0.40	Elastic Ratio-69 - 73

(2) The well casing shall consist of 2-ply No. 8 gage steel, 16 inches inside diameter. The sections of casing shall be fabricated in minimum lengths of four feet and shall be welded longitudinally with automatic equipment by a process which provides a ductile weld of approximately the same tensile strength as the parent material. After the inner and outer joints of the casing have been welded, they shall be sized to exact fit so that the inner casing shall fit to the outer casing with a tolerance not to exceed 10/1,000ths of an inch. After the casing has been pressed to exact fit, the ends shall be lathe-trimmed square to the axis so that the ends when placed together shall fit snugly for the entire circumference. The inside and outside joints shall be so fitted that the lap shall be substantially one-half the length of each joint.

(3) All casing material shall be new.

(4) The Contractor shall submit certified test reports to the Engineer to show compliance with both the physical and chemical properties of the steel specified in Subsection 2.01 (1).

2-02. Starter Section. The starter section shall consist of either three plies of No. 8 gage or two plies of No. 6 gage steel. The starter shall be at least 20 feet long and shall be equipped with a forged bit steel shoe. The driver shoe shall be a forged heat-treated (Rockwell "C" hardness 30-32), SAE 1040 steel ring fabricated to the starter section. The drive shoe shall be minimum one inch thick, 12 inches long, and 16 inches in diameter.

2-03. Conductor Casing. The conductor casing shall be fabricated in accordance with American Water Works Association Specification G 201-60 T except that requirements for hydrostatic testing shall be waived.

Fabrication shall be from 1/4 inch thick prime quality hot rolled steel plates conforming to ASTM designation A7-58T containing not less than 0.20% copper.

The inside diameter shall be minimum 20 inches. The length shall be at least 50 feet.

For field assembly by welding, sections shall be furnished with beveled ends machined on the outside to an angle of 30 degrees, measured from a line drawn perpendicular to the axis of the casing, with a tolerance of plus or minus 2-1/2 degrees and with a width of root face (or flat at the end of the casing) of 1/16 plus or minus 1/32 inch. Sections shall be furnished with approved backing up strips or chill rings for field welding.

2-04. Drilling and Installing Conductor Casing. The Contractor shall drill the well and install the conductor casing using cable tool drilling methods approved by the Engineer as circumstances may require. The Contractor shall provide and install hydraulic jacks to drive the casing.

If practicable the conductor casing shall be set into hard or impervious material. Prior to landing the conductor casing the following cementing procedure shall be employed:

Prior to setting the conductor casing on bottom a neat grout slurry weighing approximately 116 lbs. per cubic foot shall be placed to the depth of five feet from the bottom of the hole and the conductor casing shall then be driven into the bottom of the hole.

2-05. Sounding Tubes. The sounding tubes to be welded to the top section of casing shall be standard weight 2-inch black pipe conforming to the requirements of the "Specifications for Black and Hot-Dipped Zinc- (ASTM Designation A120) and installed as indicated on Drawing 3.

2-06. Concrete. Concrete used for plugging the well shall be mixed in the proportions of one part of cement and two and one-half parts of sand and 3.0 parts of gravel by volume. Cement shall be a standard brand portland cement, conforming to the requirements of the "Specifications for Portland Cement, Type I or Type II", (ASTM Designation C150). Gravel shall be one inch maximum size.

2-07. Construction of Water Well.

General.

Drilling shall be done in a manner which will yield a hole as straight and vertical as practicable with the most modern well-drilling equipment. If, in the opinion of the Engineer, the Contractor's equipment is not capable of satisfactorily performing the work provided for in these specifications, the City reserves the right to require the Contractor to provide adequate equipment. The Contractor shall provide and install hydraulic jacks to drive the casing. Construction of the well shall consist of the following:

- (1) Drilling and casing a 16-inch diameter well to a depth of approximately 500 feet using 2-ply, No. 8 gage steel casing.
- (2) Perforation of well casing in place.
- (3) Developing and production testing of the well
- (4) Plumbness and alignment test.

The well shall be drilled full size, minimum 16 inches in diameter following installation of the conductor casing. The Contractor will maintain accurate logs and collect adequate samples.

2-08. Installing the Casing.

- (1) The double wall casing sections shall be joined together by welding the circumferential seams. A gap of approximately 1/8 inch shall be provided between the outer casing joints prior to welding in order that the outer and inner joints may be welded together. Welding shall be by the electric arc process. All field welding shall be performed in accordance with American Welding Society Standards.
- (2) At the completion, the top of the casing shall be at least three feet (3) above the original ground surface at the well. A 1/4-inch thick plate 20 inches in diameter shall be welded to the top of the casing upon final completion of the well to seal the well. Longitudinal seams of the inside joints should be opposed to each other, or interchanged 180 degrees with every new joint, and the longitudinal seams of the outside joints should likewise be opposed. The longitudinal seams of the inside and outside joints should be quartered at 90 degrees.

2-09. Logs and Records. The Contractor shall keep an accurate daily log of all formations drilled through and the depths at which changes in the formations occur, together with such other information as may be required by the Engineer. Representative samples of the formation found in various strata shall be taken by the Contractor and preserved in wide-mouthed pint Mason jars with tight-fitting lids. The containers shall be furnished by the Contractor. The samples shall be plainly marked with the well identification and shall show the depths below the ground surface from which they were taken and the approximate thickness of the stratum from which each sample was removed. The samples shall become the property of the City. The log of the well shall show all material penetrated and descriptive notes made of all conditions encountered while drilling. The height to which the water naturally rises as each aquifer is penetrated shall be ascertained and recorded. The log of the well shall show the amount of material removed during development and all other pertinent data.

2-10. Sealing. Upon completion of the well, the upper 50 feet of annular space between the permanent casing and the protective casing shall be sealed using a cement grout as specified in the AWWA Standard for Deep Wells.

If directed by the Engineer the Contractor shall force a cement slurry through the well casing against the wall of the bore hole at the tuff stratum. This squeeze cementing operation shall be performed by perforating the well casing at the point selected followed by forcing the grout under pressure between expandable packers through the perforated area. Admixtures to the grout shall be permitted to ensure the proper placement in the zone outside the casing. Payment for this work is provided as an additive item in the bidding sheet.

2-11. Perforating.

(1) The location of the sections to be perforated, together with the size and number of perforations shall be designated by the Engineer after a study of the driller's log and the samples.

(2) The casing shall be perforated with a perforator having positive action. The perforator shall be so designed that it will not cause any distortion of the casing during the operation. Perforations shall be of the louver-type, opening outward, and with the aperture horizontal to the longitudinal axis of the casing and facing downward.

The aperture size, the number of openings per foot and the area of opening in square inches per lineal foot will be determined by the Engineer following inspection of the formation cuttings. The area of opening that may be required may vary from a minimum of 13.3 square inches per lineal foot to a maximum of 102.0 square inches per lineal foot, for 16 inch casing. Engineer shall calculate opening dimensions for casing sizes other than 16 inch.

Each bidder shall submit with his bid, a sample of the type of perforation he proposes to use.

Perforating shall be performed by a technician thoroughly familiar with the equipment and the technique. The technicians competency shall be judged on the basis of his experiences as evaluated by the Engineer.

2-12. Developing and Testing.

Time of Test. After the well has been completed in accordance with these specifications and the attached drawings, the Contractor shall notify the Engineer to that effect and shall make the necessary arrangements for conducting the development and production testing of the well.

2-13. Sand Pumping and Swabbing. After the casing has been perforated, the Contractor shall thoroughly sand pump and develop the well by surging with a sand pump or swab. All areas opposite perforations shall be thoroughly worked. After the swabbing and surging has been completed, the Contractor shall remove all accumulations of mud, sand and or gravel to the full depth of the well.

2-14. Swaging. After perforating and sandpumping but prior to development pumping, the roundness and smoothness of the well casing shall be ensured by passing a suitable hydraulic expanding tool throughout the entire depth of the well. The design of the expanding tool shall be such that the well casing will be stressed circumferentially to its yield point. The expanding surface of the tool shall form a true cylinder in its expanded condition.

2-15. Metering. During developing and testing operations, the Contractor shall provide metering facilities to accurately measure the rate of flow and totalize all water pumped from the well.

2-16. Development by Pumping. The Contractor shall furnish a vertical turbine pump with a minimum capacity of 3,000 gallons per minute against a total head of 225 feet when set at a depth of 200 feet below the ground surface. Sufficient power shall be provided to operate the pump and develop the well. The Contractor shall furnish and install discharge piping of sufficient size and length to conduct the water in accordance with Section 1-05. An air line, complete with a properly calibrated gage, and air pressure shall be provided to measure the elevation of water in the well. The quantity of water being pumped at the beginning of development shall be limited and the rate of pumping gradually increased as the water clears until the maximum rate is reached in consideration of reasonable drawdown. The pump shall be stopped at this point and water in the pump column allowed to flow back through the pump bowls and through the perforations into the aquifers. The pump shall then be started and the above operations repeated until the water being pumped is clear of sand and silt and the maximum flow per foot of drawdown obtained is to the satisfaction of the Engineer.

The rate of sand production shall be measured by the Contractor utilizing Contractor-furnished equipment as specified herein or approved by the Engineer. The rate of sand production shall be measured by a centrifugal sand separating meter, as described in Journal of American Water Works Association, Vol. 46, No. 2, February 1954.

2-17. Test Pumping. Following development operations, and after sufficient time has elapsed so as to ensure that the water level has completely recovered, the Contractor shall perform a complete pumping test of the well. The test pumping equipment shall have a capacity of not less than 3,000 gallons per minute against a total head of 225 feet and shall be capable of delivering water from 200 feet below the ground surface. The Contractor shall make a test of the well capacity at a sufficient number of flow rates to determine the shape of the drawdown curve from zero gallons per minute to 2,500 gallons per minute or the maximum capacity of the well, whichever is less. Pumping shall continue at each rate for a sufficient length of time to bring about a stable water level in the well. Upon completion of testing, the Contractor shall deliver a certified copy of the test pumping and development and all records to the City. At the completion of test pumping, all sand and debris shall be removed from the bottom of the well.

2-18. Plumbness and Alignment.

(1) Tests to determine the plumbness and alignment of the 16-inch diameter casings shall be made by the Contractor after the well has been completed and prior to acceptance.

(2) Plumbness and alignment shall be tested by lowering into the well a dummy 40 feet long. The outside diameter of the dummy shall be 1/2-inch less than the inside diameter of the casing. The dummy shall consist of a rigid spindle of extra heavy pipe with three rings rigidly fixed to the pipe so that they cannot move longitudinally along the pipe. The rings shall be truly cylindrical, and shall be spaced one at each end of the dummy and one ring in the center. The rings shall consist of suitable material which will not harm the interior of the casing while being lowered or raised.

(3) Should the dummy fail to move freely throughout the length of the 16-inch diameter casing, the plumbness, and alignment shall be corrected by the Contractor at his expense.

2-19. Disinfection. The Contractor shall disinfect the well in accordance with the requirements of the "AWWA Standard for Deep Wells" (AWWA Designation A100), after completion of the well.

2-20. Disposal of Pumpage. The Contractor shall dispose of all water pumped by discharging it to approved locations as identified in Section 1-05.

2-21. Final Clean-up and Grading. Upon completion of all construction, the Contractor shall remove all temporary structures, fences, and equipment from the site. All excavation or pits dug by the Contractor shall be backfilled with dirt. The premises shall be graded to original elevation and left with a neat appearance.

2-22. Earthwork.

(1) Clearing and grubbing. The area within the limits shown shall be cleared and grubbed of all vegetation and debris, which shall be disposed of by the Contractor at his own expense.

(2) Excavation. The area adjacent to the well shall be rough graded to the elevations shown. Excess excavated material shall be stockpiled adjacent to the site, as directed by the Engineer.

(3) Backfill of jacking pit. Backfill in the jacking pit shall be compacted until at least 90% of maximum density is attained. Flooding and jetting will be permitted.

(4) Compaction tests. Where backfill is required to be compacted to a specified percentage of maximum density, tests for compliance may be made by a representative of the City, at the expense of the City, using the test procedure specified in "Methods of Test for Moisture-Density Relations of Soils Using a 10-lb. rammer and an 18-inch Drop", (ASTM Designation D1557), modified to use three (3) layers. Field density tests shall be performed in accordance with the test procedure specified in "Method of Test for Density of Soil in Place by the Sand-Cone Method" (ASTM Designation D1556).

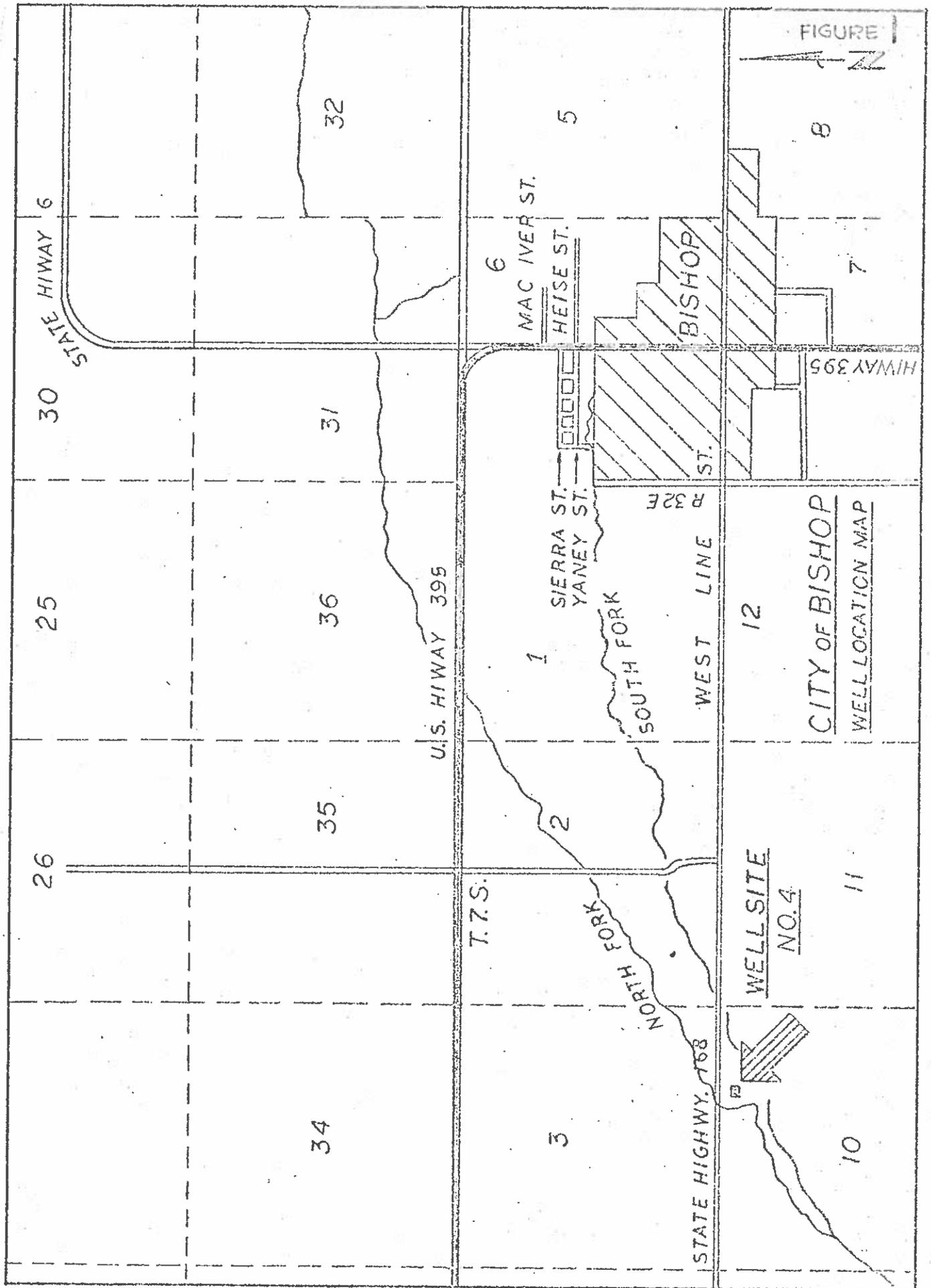
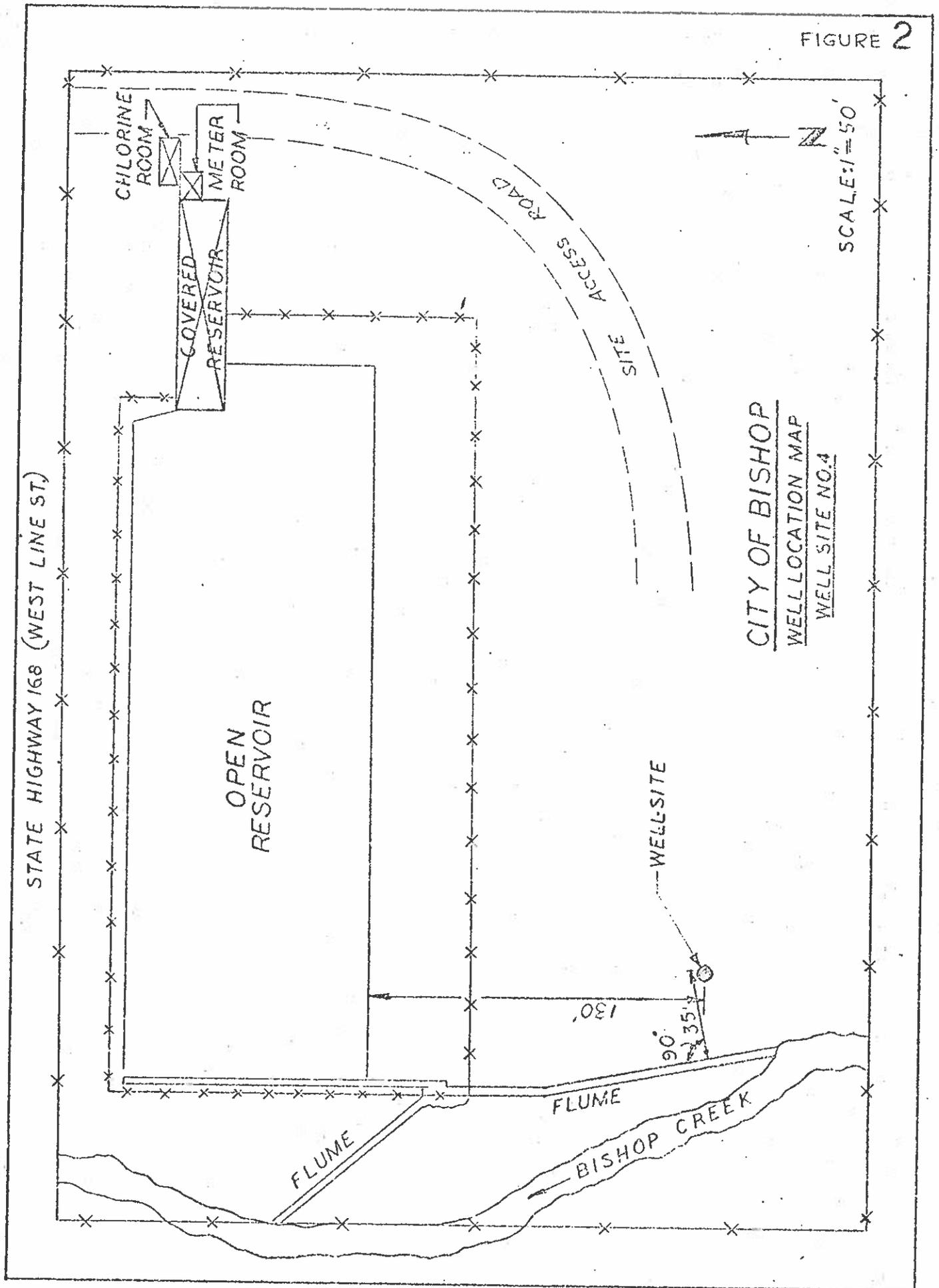
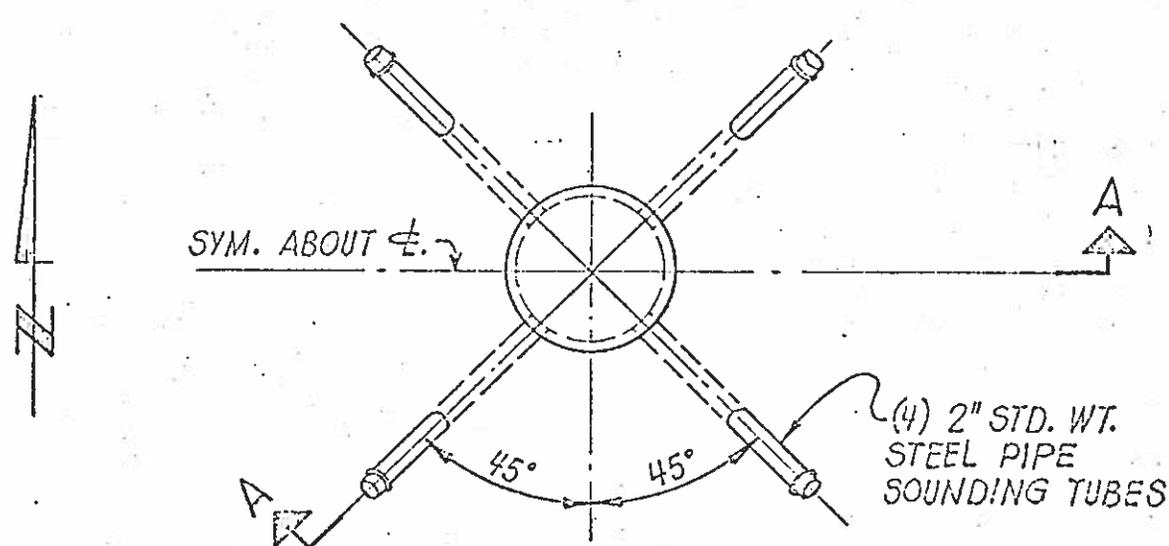


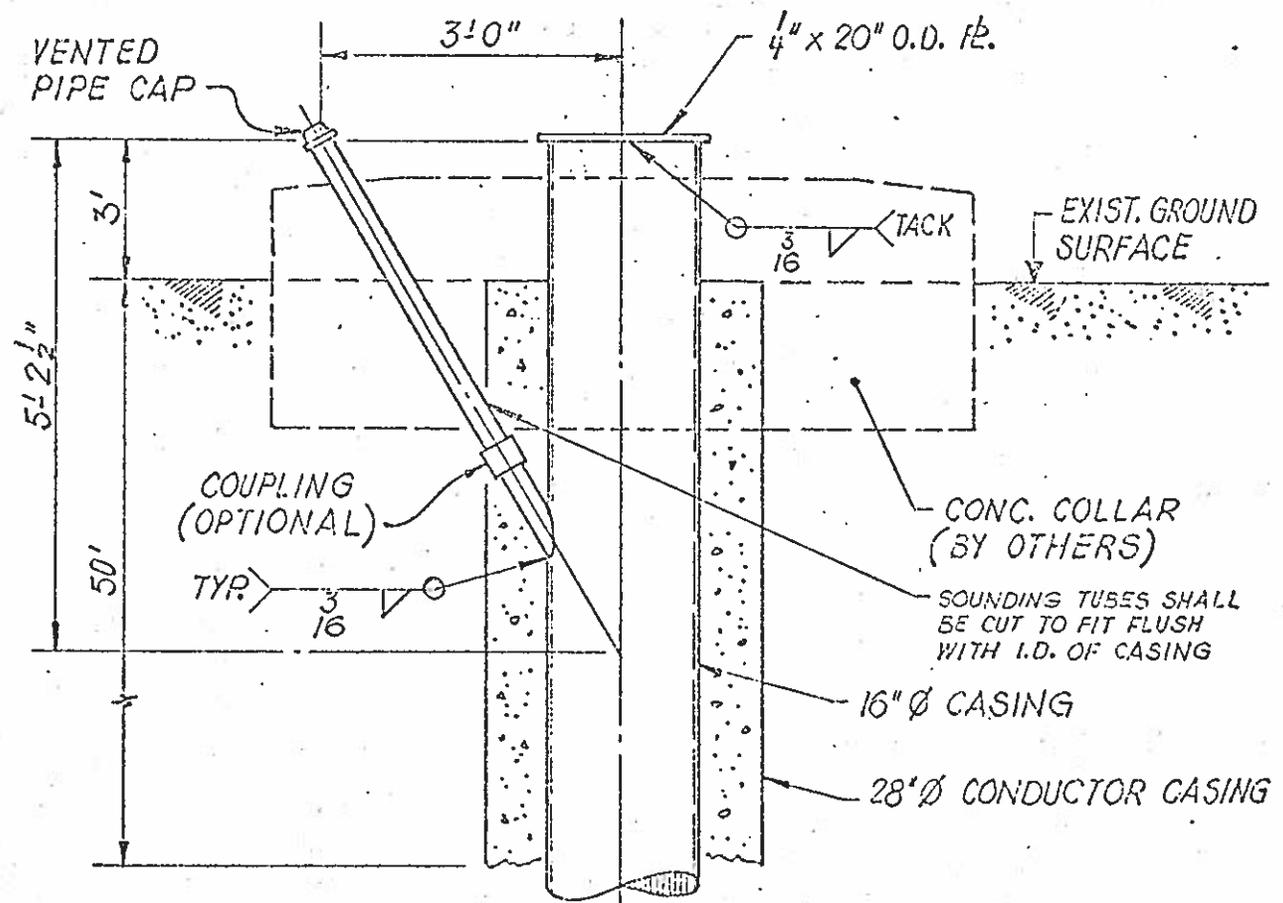
FIGURE 2



CITY OF BISHOP  
WELL LOCATION MAP  
WELL SITE NO. 4



PLAN



SECTION A-A  
NO SCALE

<p>CITY OF BISHOP CONSTRUCTION OF WELL NO. 2 &amp; 4 WELL DETAIL</p>	<p>3 OF 3</p>
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