

**TOWN OF CASTLE ROCK  
CONSTRUCTION CONTRACT**

**(Well CR-81 Equipment Replacement and Alluvial Wells Rehabilitation Project)**

THIS CONSTRUCTION CONTRACT (Contract) between the Town of Castle Rock, Colorado (Town), a municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 and Colorado Pump Service & Supply Co., a Colorado corporation (“Contractor”) 511 South Gilbert Street unit C, Castle Rock, Colorado 80104

In consideration of these mutual covenants and conditions, the Town and Contractor agree as follows:

**SCOPE OF WORK** The Contractor shall execute the entire Work described in the Contract.

**CONTRACT** The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, written or oral representations and agreements. The Contract incorporates the following Contract Documents. In resolving inconsistencies among two or more of the Contract Documents, precedence will be given in the same order as enumerated.

**LIST OF CONTRACT DOCUMENTS**

The Contract Documents, except for Modifications issued after execution of this Contract, are:

1. Change Orders;
2. Notice to Proceed;
3. Construction Contract;
4. General Conditions
5. The following Addenda, if any:

**Addendum No. 1 dated            October 21, 2019 – 14 Pages**

6. Special Conditions of the Contract:

<b>Document</b>	<b>Title</b>	<b>Pages</b>
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7. The following Specifications: Well Specification and Tables

8. The following Drawings:

9. Notice of Award;
10. Invitation to Bid;
11. Information and Instructions to Bidders;

12. Notice of Substantial Completion;
13. Notice of Construction Completion;
14. Proposal Forms, including Bid Schedules;
15. Performance, and Labor and Material Payment Bonds;
16. Performance Guarantee; and
17. Insurance Certificates.

**CONTRACT PRICE.** The Town shall pay the Contractor for performing the Work and the completion of the Project according to the Contract, subject to Change Orders as approved in writing by the Town, under the guidelines in the General Conditions. The Town will pay \$252,216.00 (Contract Price), to the Contractor, subject to full and satisfactory performance of the terms and conditions of the Contract. The Contract Price is provisional based on the quantities contained in the (Bid or Proposal) attached as *Exhibit 1*. The final Contract Price shall be adjusted to reflect actual quantities incorporated into the Work at the specified unit prices. The Town has appropriated money equal or in excess of the Contract Price for this work.

**COMPLETION OF WORK.** The Contractor must begin work covered by the Contract within 30 calendar days, and must complete work within 120-working days from and including the date of Notice to Proceed, according to the General Conditions. The Work should be completed by March 31, 2020.

**LIQUIDATED DAMAGES.** If the Contractor fails to complete the Work by the date set for completion in the Contract, or if the completion date is extended by a Change Order, by the date set in the Change Order, the Town may permit the Contractor to proceed, and in such case, may deduct the sum of \$500 for each day that the Work shall remain uncompleted from monies due or that may become due the Contractor. This sum is not a penalty but is a reasonable estimate of liquidated damages.

The parties agree that, under all of the circumstances, the daily basis and the amount set for liquidated damages is a reasonable and equitable estimate of all the Town's actual damages for delay. The Town expends additional personnel effort in administering the Contract or portions of the Work that are not completed on time, and has the cost of field and office engineering, inspecting, and interest on financing and such efforts and the costs thereof are impossible to accurately compute. In addition, some, if not all, citizens of Castle Rock incur personal inconvenience and lose confidence in their government as a result of public projects or parts of them not being completed on time, and the impact and damages, certainly serious in monetary as well as other terms are impossible to measure.

**SERVICE OF NOTICES.** Notices to the Town are given if sent by registered or certified mail, postage prepaid, to the following address:

TOWN OF CASTLE ROCK  
Town Attorney  
100 N. Wilcox Street  
Castle Rock, CO 80104

**INSURANCE PROVISIONS.** The Contractor must not begin any work until the Contractor obtains, at the Contractor's own expense, all required insurance as specified in the General Conditions. Such insurance must have the approval of the Town of Castle Rock as to limits, form and amount.

**RESPONSIBILITY FOR DAMAGE CLAIMS.** The Contractor shall indemnify, save harmless, and defend the Town, its officers and employees, from and in all suits, actions or claims of any character brought because of: any injuries or damage received or sustained by any person, persons or property because of operations for the Town under the Contract; including but not limited to claims or amounts recovered from any infringements of patent, trademark, or copyright; or pollution or environmental liability. The Town may retain so much of the money due the Contractor under the Contract, as the Town considers necessary for such purpose. If no money is due, the Contractor's Surety may be held until such suits, actions, claims for injuries or damages have been settled. Money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that the Contractor and the Town are adequately protected by public liability and property damage insurance.

The Contractor also agrees to pay the Town all expenses, including attorney's fees, incurred to enforce this Responsibility for Damage Claim clause.

Nothing in the **INSURANCE PROVISIONS of the General Conditions** shall limit the Contractor's responsibility for payment of claims, liabilities, damages, fines, penalties, and costs resulting from its performance or nonperformance under the Contract.

**STATUS OF CONTRACTOR.** The Contractor is performing all work under the Contract as an independent Contractor and not as an agent or employee of the Town. No employee or official of the Town will supervise the Contractor. The Contractor will not supervise any employee or official of the Town. The Contractor shall not represent that it is an employee or agent of the Town in any capacity. **The Contractor and its employees are not entitled to Town Workers' Compensation benefits and are solely responsible for federal and state income tax on money earned.** This is not an exclusive contract.

**THIRD PARTY BENEFICIARIES.** None of the terms or conditions in the Contract shall give or allow any claim, benefit, or right of action by any third person not a party to the Contract. Any person, except the Town or the Contractor, receiving services or benefits under the Contract is an incidental beneficiary only.

**INTEGRATION.** This contract integrates the entire understanding of the parties with respect to the matters set forth. No representations, agreements, covenants, warranties, or certifications, express or implied, shall exist as between the parties, except as specifically set forth in this Contract.

**DEFINITIONS.** The Definitions in the General Conditions apply to the entire Contract unless modified within a Contract Document.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_.

**ATTEST:**

**TOWN OF CASTLE ROCK**

\_\_\_\_\_  
Lisa Anderson, Town Clerk

\_\_\_\_\_  
Jason Gray, Mayor

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Robert J. Slentz, Town Attorney

**CONTRACTOR:**

**COLORADO PUMP SERVICE & SUPPLY CO.,**  
a Colorado corporation

By: \_\_\_\_\_

Title: \_\_\_\_\_

*(Insert either the Corporate or Partnership Certificate, as appropriate)*

**EXHIBIT 1  
(PROPOSAL/BID)**

## Bid for Well CR-12R Horizontal Well Rehabilitation Services

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Pull existing equipment	Lump Sum	1	3240.00	3240.00
2	Conduct color well video survey before the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log. (This may be subbed out.)	Lump Sum	1	2,400.00	2,400.00
3	Price to perform comprehensive well cleaning program. Amount to include all associated costs such as: materials, equipment, and labor; as well as coordination & inspection charges, and markups. Proposal to provide step-by step summary of cleaning methods with recommended materials, quantities, and hours needed for cleaning operations.	Lump Sum	1	33,469.00	33,469.00
4	Estimated hours and cost for sand pumping sediment from bottom of hole. (Provide hourly unit cost in case additional sand pumping is required). Hourly Unit Cost \$ _____ Estimated Hours _____	Lump Sum	1	Included in Jetting Discharge method	
5	Price to rig up and install temporary pumping equipment, and pump well until the water is relatively clear. Include cost for on-site storage of contaminated fluid to neutralize and send to sanitary line. Also include costs associated with any permitting.	Lump Sum	1	4620.00	4620.00
6	Conduct color well video survey following completion of the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	2400.00	2400.00
7	Cost for new submersible pump recommended by contractor/ consultant for existing well conditions (design of approximately 80 gpm / at a TDH of 200 feet) including all testing and freight fees. Lump sum cost to include a one-year warranty. Current Model 85S100-8 (10 hp)	Lump Sum	1	2635.00	2635.00
8	Cost for new submersible motor that is compatible with the new recommended pump, including a one-year warranty	Lump Sum	1	1847.00	1847.00
9	Cost to supply compatible replacement seal section or motor protector for the new	Lump Sum	1		N/A

	pump and motor, also including a one-year warranty.				
10	Charges for all equipment installation including all banding supplies, new airlines, new motor lead if needed, and splicing supplies for additional motor cable. Also charges for any modifications needed to shroud; or replacement of shroud if existing shroud is not compatible with the new motor; and any other modifications to other equipment as needed. Also charges for the well disinfection and start-up.	Lump Sum	1		
				11,190.00	11,190.00
11	Install 165 feet of 1¼ inch PVC for transducer with pump assembly	L.F.	165	144.00	144.00
<b>Subtotal Bid Amount (A)</b>					<b>61,945.00</b>

**Bid for Well AL-13R Horizontal Well Rehabilitation Services**

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Pull existing equipment	Lump Sum	1	3240.00	3240.00
2	Conduct color well video survey before the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log. (This may be subbed out.)	Lump Sum	1	2400.00	2400.00
3	Price to perform comprehensive well cleaning program. Amount to include all associated costs such as: materials, equipment, and labor; as well as coordination & inspection charges, and markups. Proposal to provide step-by step summary of cleaning methods with recommended materials, quantities, and hours needed for cleaning operations.	Lump Sum	1	38,014.00	38014.00
4	Estimated hours and cost for sand pumping sediment from bottom of hole. (Provide hourly unit cost in case additional sand pumping is required). Hourly Unit Cost \$ _____ Estimated Hours _____	Lump Sum	1	Included in Setting Discharge method	
5	Price to rig up and install temporary pumping equipment, and pump well until the water is relatively clear. Include cost for on-site storage of contaminated fluid. Also include costs associated with any permitting.	Lump Sum	1	4620.00	4620.00
6	Conduct color well video survey following completion of the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	2400.00	2400.00
7	Cost for new submersible pump recommended by contractor/ consultant for existing well conditions (design of approximately 34 to 40 gpm / at a TDH of 105 feet) including all testing and freight fees. Lump sum cost to include a one-year warranty. Current Model 85S50-4 (5 hp)	Lump Sum	1	1699.00	1699.00
8	Cost for new submersible motor that is compatible with the new recommended pump, including a one-year warranty	Lump Sum	1	1062.00	1062.00
9	Cost to supply compatible replacement seal section or motor protector for the new	Lump Sum	1		N/A

	pump and motor, also including a one-year warranty.				
10	Charges for all equipment installation including all banding supplies, new airlines, new motor lead if needed, and splicing supplies for additional motor cable. Also charges for any modifications needed to shroud; or replacement of shroud if existing shroud is not compatible with the new motor; and any other modifications to other equipment as needed. Also charges for the well disinfection and start-up.	Lump Sum	1	12771.00	12771.00
11	Install 170 feet of 1¼ inch PVC for transducer with pump assembly	L.F.	170	144.00	144.00
<b>Subtotal Bid Amount (B)</b>					66,350.00

**Bid for Well AL-2 Well Rehabilitation Services**

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Pull existing equipment	Lump Sum	1	990.00	990.00
2	Conduct color well video survey before the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log. (This may be subbed out.)	Lump Sum	1	500.00	500.00
3	Price to perform comprehensive well cleaning program. Amount to include all associated costs such as: materials, equipment, and labor; as wells as coordination & inspection charges, and markups. Proposal to provide step-by step summary of cleaning methods with recommended materials, quantities, and hours needed for cleaning operations.	Lump Sum	1	12,781.00	12,781.00
4	Estimated hours and cost for sand pumping sediment from bottom of hole. (Provide hourly unit cost in case additional sand pumping is required). Hourly Unit Cost \$ <u>210.00</u> Estimated Hours <u>7</u>	Lump Sum	1	1470.00	1470.00
5	Price to rig up and install temporary pumping equipment, and pump well until the water is relatively clear. Include cost for on-site storage of contaminated fluid. Also include costs associated with any permitting.	Lump Sum	1	3512.00	3512.00
6	Conduct color well video survey following completion of the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	500.00	500.00
7	Cost for new submersible pump recommended by contractor/ consultant for existing well conditions (design of approximately 65 gpm / at a TDH of 175 feet) including all testing and freight fees. Lump sum cost to include a one-year warranty. Current Model 62S50-9 (5 hp)	Lump Sum	1	1527.00	1527.00
8	Cost for new submersible motor that is compatible with the new recommended pump, including a one-year warranty	Lump Sum	1	1062.00	1062.00
9	Cost to supply compatible replacement seal section or motor protector for the new	Lump Sum	1		N/A

	pump and motor, also including a one-year warranty.				
10	Charges for all equipment installation including all banding supplies, new airlines, new motor lead if needed, and splicing supplies for additional motor cable. Also charges for any modifications needed to shroud; or replacement of shroud if existing shroud is not compatible with the new motor; and any other modifications to other equipment as needed. Also charges for the well disinfection and start-up.	Lump Sum	1		
				6996.00	6996.00
<b>Subtotal Bid Amount (C)</b>					29,338.00

**Bid for Well AL-9 Well Rehabilitation Services**

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Pull existing equipment	Lump Sum	1	990.00	990.00
2	Conduct color well video survey before the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log. (This may be subbed out.)	Lump Sum	1	500.00	500.00
3	Price to perform comprehensive well cleaning program. Amount to include all associated costs such as: materials, equipment, and labor; as wells as coordination & inspection charges, and markups. Proposal to provide step-by step summary of cleaning methods with recommended materials, quantities, and hours needed for cleaning operations.	Lump Sum	1	12782.00	12782.00
4	Estimated hours and cost for sand pumping sediment from bottom of hole. (Provide hourly unit cost in case additional sand pumping is required). Hourly Unit Cost \$ <u>210.00</u> Estimated Hours <u>7</u>	Lump Sum	1	1470.00	1470.00
5	Price to rig up and install temporary pumping equipment, and pump well until the water is relatively clear. Include cost for on-site storage of contaminated fluid. Also include costs associated with any permitting.	Lump Sum	1	3512.00	3512.00
6	Conduct color well video survey following completion of the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	500.00	500.00
7	Cost for new submersible pump recommended by contractor/ consultant for existing well conditions (design of approximately 200 gpm / at a TDH of 194 feet) including all testing and freight fees. Lump sum cost to include a one-year warranty. Current Model 230S150-50-B (15 hp)	Lump Sum	1	2398.00	2398.00

8	Cost for new submersible motor that is compatible with the new recommended pump, including a one-year warranty	Lump Sum	1	2122.00	2122.00
9	Cost to supply compatible replacement seal section or motor protector for the new pump and motor, also including a one-year warranty.	Lump Sum	1		N/A
10	Charges for all equipment installation including all banding supplies, new airlines, new motor lead if needed, and splicing supplies for additional motor cable. Also charges for any modifications needed to shroud; or replacement of shroud if existing shroud is not compatible with the new motor; and any other modifications to other equipment as needed. Also charges for the well disinfection and start-up.	Lump Sum	1	7032.00	7032.00
<b>Subtotal Bid Amount (D)</b>					<b>31,306.00</b>

### Bid for Well CR-81 Well Rehabilitation Services

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Pull existing equipment and dispose	Lump Sum	1	740.00	740.00
2	Conduct color well video survey before the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	500.00	500.00
3	Price to perform comprehensive well cleaning program. Amount to include all associated costs such as: materials, equipment, and labor; as wells as coordination & inspection charges, and markups. Proposal to provide step-by step summary of cleaning methods with recommended materials, quantities, and hours needed for cleaning operations.	Lump Sum	1	10063.00	10063.00
4	Estimated hours and cost for sand pumping sediment from bottom of hole. (Provide hourly unit cost in case additional sand pumping is required). Hourly Unit Cost \$ <u>210.00</u>	Lump Sum	1	1470.00	1470.00
5	Price to rig up and install temporary pumping equipment, and pump well until the water is relatively clear. Include cost for on-site storage of contaminated fluid. Also include costs associated with any permitting.	Lump Sum	1	3512.00	3512.00
6	Conduct color well video survey following completion of the rehabilitation treatment. Video camera to have 90 degree angle capability. Provide one DVD copy of the survey and a survey log.	Lump Sum	1	500.00	500.00
7	Perform and review an 8 hour step drawdown test and 48 hour pumping test to recommend final design of pump sizing.	HR	56	208.928 <del>11700.00</del>	11700.00
8	Cost for new submersible pump recommended by contractor/ consultant for existing well conditions (design of approximately 40-80 gpm / at a TDH of 175 feet) including all testing and freight fees. Lump sum cost to include a one year warranty.	Lump Sum	1	773.00	773.00
9	Cost for new submersible motor that is compatible with the new recommended pump, including a one year warranty	Lump Sum	1	470.00	470.00

10	Cost to supply compatible replacement seal section or motor protector for the new pump and motor, also including a one year warranty.	Lump Sum	1		N/A
11	Charges for all equipment installation including all banding supplies, new airlines, new motor lead if needed, and splicing supplies for additional motor cable. Also charges for any modifications needed to shroud; or replacement of shroud if existing shroud is not compatible with the new motor; and any other modifications to other equipment as needed. Also charges for the well disinfection and start-up.	Lump Sum	1	6705.00	6705.00
12	New 2 7/8" J55 Drop Pipe Pump intake at 45 feet	Foot	35	624.00	624.00
<b>Subtotal Bid Amount (E)</b>					<b>37057.00</b>

**Well Abandonment Permit 14276-F John Kinner 1**

Bidder will complete bid pricing for the following tasks:

	<b>Task Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total</b>
1	Removal of existing pumping equipment if present	Lump Sum	1	1806.00	1806.00
2	Abandon the well	Lump Sum	1	3775.00	3775.00
3	Abandon pump controls	Lump Sum	1	420.00	420.00
4	Restore site	Lump Sum	1	554.00	554.00
<b><u>Subtotal Bid Amount (F)</u></b>					6555.00

**Well Abandonment Permit 16257-F Huntsville**

Bidder will complete bid pricing for the following tasks:

	<b>Task Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total</b>
1	Removal of existing pumping equipment if present	Lump Sum	1	1806.00	1806.00
2	Abandon the well	Lump Sum	1	3775.00	3775.00
3	Abandon pump controls	Lump Sum	1	420.00	420.00
4	Restore site	Lump Sum	1	554.00	554.00
<b><u>Subtotal Bid Amount (G)</u></b>					6555.00

**Well Abandonment Permit 16258-F John Kinner 2**

Bidder will complete bid pricing for the following tasks:

	<b>Task Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total</b>
1	Removal of existing pumping equipment if present	Lump Sum	1	1806.00	1806.00
2	Abandon the well	Lump Sum	1	3775.00	3775.00
3	Abandon pump controls	Lump Sum	1	420.00	420.00
4	Restore site	Lump Sum	1	554.00	554.00
<b><u>Subtotal Bid Amount (H)</u></b>					6555.00

**Well Abandonment Permit 16259-F Benjamin Quick**

Bidder will complete bid pricing for the following tasks:

	Task Description	Unit	Quantity	Unit Price	Total
1	Removal of existing pumping equipment if present	Lump Sum	1	1806.00	1806.00
2	Abandon the well	Lump Sum	1	3775.00	3775.00
3	Abandon pump controls	Lump Sum	1	420.00	420.00
4	Restore site	Lump Sum	1	554.00	554.00
<b>Subtotal Bid Amount (I)</b>					<b>6555.00</b>

**Optional Bid for Alluvial Well Rehabilitation Services**

1	Water disposal charge – price to haul all contaminated water to appropriate disposal facility. Also provide unit cost for hauling and disposing a single truck load: <u>\$ 1500.00/c</u> (If we are unable to use the sanitary line)	Lump Sum	<del>*</del> 11	16500.00
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**Optional Bid Amount** 16,500.00

two hundred fifty two thousand two hundred and sixteen dollars zero cents

Total Base Bid in Words (A+B+C+D+E+F+G+H+I)

Greg A. Wood Jr. 10/27/2019  
Signature and Date

\$ 252,216.00  
Total Base Bid In Figures

Estimated Start Date

Within 14 days from Notice to Proceed

Estimated Completion Date

March 31, 2020



Town of Castle Rock  
Castle Rock Water Department  
175 Kellogg Court  
Castle Rock, CO 80109  
720-733-6000

**LETTER OF INDEMNIFICATION  
FOR WITHHOLDING CONFIDENTIAL INFORMATION**

Re: Request under the Colorado Open Records Act

Request for Proposal Number: \_\_\_\_\_

Proposals submitted by consultants in response to the Town of Castle Rock's Request for Proposal are subject to the Colorado Open Records Act. Should the Town receive a request for the release of any information in the Submitter's proposal in accordance with the Open Records Law, the Town will review the Submitter's proposal, giving consideration to the portions that the Submitter indicated contained trade secrets, privileged information, or confidential commercial, financial, geological, or geophysical data, and may release only that information which has not been identified as confidential and/or proprietary in your proposal pursuant to C.R.S. 24-72-201. If in the opinion of the Town's legal counsel, the Town is nonetheless compelled to disclose any portion of such information to anyone or else stand liable for contempt or suffer censure or penalty, the Town may disclose such information without liability.

By having an authorized officer of the company sign below, Submitter agrees to the aforementioned waiver of liability and to indemnify the Town of Castle Rock for any and all attorney fees that the Town may incur in defending the withholding of such information.

Colorado Pump Service & Supply Co  
Submitter (Vendor or Business Name)

By: George H Wood Jr  
Signature

George H Wood Jr  
Name (please print)

Vice President  
Title

10/23/19  
Date

WATER SYSTEMS  
PUMPS  
PARTS & SUPPLIES

STATE LICENSE NO. 1119  
BONDED/INSURED

**COLORADO PUMP**  
**SERVICE & SUPPLY CO.**  
511 S. GILBERT ST. UNIT C  
**(303) 688-6462**

SERVICE  
REPAIRS  
INSTALLATIONS

P.O. BOX 1443  
CASTLE ROCK, CO. 80104  
Fax (303) 688-7565

Castle Rock Well 81 Equipment Replacement and Alluvial Well Rehabilitation Project

Chemicals Required

Cotey chemical Liquid Acid Descaler	8% to 10% Well Concentration
Caustic Soda	Acid Neutralization
Sodium hypochlorite	10% concentration @ 300 PPM

Well Rehabilitation Procedures, Vertical Wells

Pull equipment out of well.

Video well per speck.

Bail or sand bucket out the fill to original TD. Estimate 4 hrs. Check well original PH.

Pre-Brush casing and screen to clear off large scale and soft accumulation. Estimated time is dependent on well video and amount of loose build up. This will help place less demand on cleaning chemistry.

Bail or sands bucket back to TD of well. 1 hrs.

Mix required chemical solution in mixing tanks, Install chemical in well

Install a double disk surge block to distribute the acid throughout the water level, with a brush tool on the bottom. The rubber disks should fit snugly in the well casing which will provide good percussion/suction through the screens. Surge and brush well from water level to bottom screen. Starting off slowly at first to mix solution than increasing speed to a rate of 4 FT per second. Brush screen sections and plain casing 6 hrs. Checking fill in the well so as to not fill in well past the bottom screen. Let acid sit overnight, surge and brush additional 2 hrs.

After surging and brushing pull out brush and surge block and install evacuation pump and pump into storage tanks, neutralize water to be pumped to sewer manhole or hauled off site if required. Pump water until it reaches original PH. Once the ph. is normal the well will have to be pumped to waste to sewer main until the water is clear. Estimated volume that will need to be pumped is 10 X well volume of (depending on individual well). Temporary storage tanks and or tanker truck will be used on site to hold neutralized or acidic water until all is pumped to sewer main or hauled away off site.

Chlorination

Mix of Sodium Hypochlorite to achieve a 300 ppm concentration of chlorine solution in well volume, circulate solution in well using evac pump, pull evac pump, video well, then sand bucket well to TD 1 hrs.

Estimated 7-10 days per well to complete rehab.

WATER SYSTEMS  
PUMPS  
PARTS & SUPPLIES

STATE LICENSE NO. 1119  
BONDED/INSURED

**COLORADO PUMP**  
**SERVICE & SUPPLY CO.**  
511 S. GILBERT ST. UNIT C  
**(303) 688-6462**

SERVICE  
REPAIRS  
INSTALLATIONS

P.O. BOX 1443  
CASTLE ROCK, CO. 80104  
Fax (303) 688-7565

Castle Rock Well 81 Equipment Replacement and Alluvial Well Rehabilitation Project

Chemicals Required

Cotey chemical Liquid Acid Descaler	8% to 10% Well Concentration
Caustic Soda	Acid Neutralization
Sodium hypochlorite	10% concentration @ 300 PPM

Well Rehabilitation Procedures, Horizontal Wells

Pull equipment out of well.

Video well per speck.

Pre-Brush casing and screen to clear off large scale and soft accumulation. Estimated time is dependent on well video and amount of loose build up. This will help place less demand on cleaning chemistry.

Install jetting tool in well, clear water jet from static water level to bottom of well, slowly moving downward @ 800 to 1000 PSI. at the same time, we will evac material from additional lateral. We will repeat this process on both laterals.

Mix required chemical solution in mixing tanks, jet solution in all screen sections, let sit 24 hrs. minimum then evac solution from the bottom of the well to storage tanks, neutralize water to be pumped to sewer manhole or hauled off site if required. Pump water until it reaches original PH. Once the ph. is normal the well will have to be pumped to waste to sewer main until the water is clear. Estimated volume that will need to be pumped is 10 X well volume of (depending on individual well). Temporary storage tanks and or tanker truck will be used on site to hold neutralized or acidic water until all is pumped to sewer main or hauled away off site.

Chlorination

Mix of Sodium Hypochlorite to achieve a 300 ppm concentration of chlorine solution in well volume, circulate solution in well from one lateral to the other, using evac pump, pull evac pump, video well,

Estimated 10-14 days per well to complete rehab.