

TOWN OF CASTLE ROCK CONSTRUCTION CONTRACT

(Wells CR-27R and CR-231)

THIS CONSTRUCTION CONTRACT (Contract) between the Town of Castle Rock, Colorado (Town), a municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 and Hydro Resources – Rocky Mountain, Inc., a Delaware corporation (“Contractor”) 13027 County Road, Unit C, Fort Lupton, Colorado 80621

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:

Number	Date	Pages
---------------	-------------	--------------

6. Special Conditions of the Contract:

Document	Title	Pages
-----------------	--------------	--------------

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 \$3,505,877.00 (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 150-working days from and including the date of Notice to Proceed, according to the General Conditions. The Work should be completed by May 1, 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:

By: _____

Title: _____

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

EXHIBIT 1
(PROPOSAL/BID)



Rocky Mountain Region
13027 County Road 18, Unit C
Fort Lupton, CO 80621
(303) 857-7540
Fax (303) 857-3826

September 23, 2019

**To: Town of Castle Rock
Castle Rock Water**

ATTN: Heather Justus – Water Resources Project Manager

Project: Arapahoe Well 27R and Well 231 Well Drilling and Pump Installation

Ms. Justus,

Hydro Resources (HR) is pleased to present the following proposal for well drilling and pump services for the Arapahoe Well 27R and Well 231 Project. Hydro Resources looks forward to another opportunity to team with Castle Rock and Leonard Rice Engineers on a successful drilling project. HR has reviewed the specifications and bid parameters provided by Leonard Rice and has reviewed both drilling sites with our operations group. HR wishes to outline our understanding of the scope of work.

Before reviewing the project details, HR would first like to stress our commitment to providing Castle Rock with a company committed to making Health & Safety our number one priority on this project. HR has broken down the proposal into the following units:

- I. Key Equipment to be supplied to the Project
- II. Technical Approach
- III. Unit Cost Breakdown

I. Key Equipment to be supplied to the Project

HR intends to mobilize the following equipment to the Castle Rock site:

- The primary drilling rig will be a Challenger 320 drilling rig or equivalent. The Challenger 320 rig has a 72' mast rated at 150,000 lbs. with an 18" Howard Turner rotary table.
- The rig will be equipped with 2000 ft of appropriate-sized drill pipe, a Sullair 900 CFM compressor and a Sullair 375 CFM compressor. HR has assumed a support truck for pipe and miscellaneous parts to complete the work.
- The drilling package includes a three-man drilling crew working 24 hours per day.
- HR will provide a pump rig for test pumping activities.
- HR has included sound walls and site development necessary at both drilling sites.



The equipment listed above will be dedicated to this project on a full-time basis and all the equipment is up to date with annual inspections and certifications.

II. Technical Approach

HR is providing the following summary of our technical approach regarding expected geology and drilling plan.

Well Drilling & Pump Installation

- HR will submit the GESC plans for each site.
- The Challenger 320 rig will be mobilized to the site and set up over the first well site (Well 27R).

Well 27R - Drilling

- 30' sound walls and a gate will be installed around the drill rig by the nearest residences.
- A 30" conductor casing will be installed to approximately 40'.
- The rig will drill a 20" hole from the surface to 1,685'.
- Perform geophysical log to determine screen interval.
- Install .035 slot screen and 12" casing to the surface. The casing will be a combination of stainless steel and carbon steel.
- Install filter pack (SiLi beads) with a 10' fine sand plug. Pressure grout casing with neat cement and bentonite grout in the annular seal to surface.
- Development of well to include circulation, airlift, and jetting.
- Install temporary test pump, perform development pumping, step testing, and 72-hour continuous pump test. Remove test pump equipment and perform final disinfection.
- Perform video survey of the well.
- Remove pump equipment and abandon existing Well 27.
- Demobilize rig and restore site.

Well 27R – Permanent Equipment

- HR will work with Castle Rock and Leonard Rice following the well test pumping and develop the design of the permanent pump equipment. For the initial bid, HR has included the following equipment:
 - 1ea SH13000-18 Stg Summit Subm. Pump (325GPM@1500ft)
(Final TDH, set depths, to be determined upon completion of drilling and Testing)
 - 1ea 180HP Summit Motor 2290V/43A
 - 1ea 513 BSBSL Monel Shaft Aflas Bag, SLUM, HD Water Well
 - 1ea Motor Lead w/factory splice

- 1ea 10" Baski Deep Well Pitless Adpt. 6.5ft bury 4.5" Column/6" Discharge w/4-
Restraints
- 1ea 4.5" Stainless DW Flowmatic Check Valve w/ko
- 1ea 8" 304SS Motor Cooling Shroud
- ±1800ft #4SOL w/6 grnd. Subm. Cable 5kv Galv. Armored (~100ft to stepup transformer)
- ±1700ft 4.5" 304SS Column Pipe (20ft) 8Round w/304SS Coupling
- ±1700ft 1 1/4" PVC Motor Tube
- ±1700ft 1/4" Dbl Nylon Airline
- ±1730ft 500PSI Transducer w/SS Cable
- (Lot) Service Supplies - Tape, banding, HTH, etc.

#27R Electrical Gear

- 1ea VSD Summit, 6P 217Kva, 261A Nema 4 (Supply Only)
- 1ea HGP Input Harmonic Filter 302A (Supply Only) 5% THD
- 1ea 210Kva Southwest Electric Stepup Transformer (Supply Only)
- (Lot) Service Supplies - Tape, banding, HTH, etc.

Well 231 - Drilling

- 30' sound walls and a gate will be installed around the drill rig by the nearest residences.
- A 30" conductor casing will be installed to approximately 40'.
- The rig will drill a 20" hole from the surface to 1,705'.
- Perform geophysical log to determine screen interval.
- Install .035 slot screen and 12" casing to the surface. The casing will be a combination of stainless steel and carbon steel.
- Install filter pack (SiLi beads) with a 10' fine sand plug. Pressure grout casing with neat cement and bentonite grout in the annular seal to surface.
- Development of well to include circulation, airlift, and jetting.
- Install temporary test pump, perform development pumping, step testing, and 72-hour continuous pump test. Remove test pump equipment and perform final disinfection.
- Perform video survey of the well.
- Demobilize rig and restore site.

Well 231 – Permanent Equipment

- HR will work with Castle Rock and Leonard Rice following the well test pumping and develop the design of the permanent pump equipment. For the initial bid, HR has included the following equipment:
 - 1ea SH13000-18 Stg Summit Subm. Pump (325GPM@1500ft)
(Final TDH, set depths, to be determined upon completion of drilling and Testing)
 - 1ea 180HP Summit Motor 2290V/43A
 - 1ea 513 BSBSL Monel Shaft Aflas Bag, SLUM, HD Water Well
 - 1ea Motor Lead w/factory splice
 - 1ea 10" Baski Deep Well Pitless Adpt. 6.5ft bury 4.5" Column/6" Discharge w/4-Restraints
 - 1ea 4.5" Stainless DW Flowmatic Check Valve w/ko
 - 1ea 8" 304SS Motor Cooling Shroud
 - ±1800ft #4SOL w/6 grnd. Subm. Cable 5kv Galv. Armored (~100ft to stepup transformer)
 - ±1700ft 4.5" 304SS Column Pipe (20ft) 8Round w/304SS Coupling
 - ±1700ft 1 1/4" PVC Motor Tube
 - ±1700ft 1/4" Dbl Nylon Airline
 - ±1730ft 500PSI Transducer w/SS Cable
 - (Lot) Service Supplies - Tape, banding, HTH, etc.

Well #231 Electrical Gear

- 1ea VSD Summit, 6P 217Kva, 261A Nema 4 (Supply Only)
- 1ea HGP Input Harmonic Filter 302A (Supply Only) 5% THD
- 1ea 210Kva Southwest Electric Stepup Transformer (Supply Only)
- (Lot) Service Supplies - Tape, banding, HTH, etc.

III. Unit Cost Breakdown

HR has attached Bid Schedules for Well 27R and Well 231 for your review. We have also attached the preliminary pump curves for the permanent pumping equipment.

Clarifications:

- HR has assumed access for the drill rig (level site, approx. 150' x 200').
- HR has included all fuel costs.
- HR has included removal and disposal of drilling mud and drill cuttings for both sites.
- The Drilling Derived Waste assumed to be non-hazardous waste and has been assumed to be hauled from each site and disposed of.
- HR has included an allowance for water hauling. The engineer/city will provide a source of water.
- The bid is a complete package and cannot be modified without prior written authorization from HR. Also, this is an estimate and the final invoice will reflect actual quantities utilized in the field which are properly documented multiplied by the unit rates quoted.
- A mutually agreeable written contract will be negotiated prior to mobilization.
- HR has assumed working 24 hours a day

We are confident that the Town of Castle Rock will be impressed with our professional water supply services and look forward to the opportunity to team with the community on this exciting project. Please contact our office at your earliest convenience with any questions or concerns you may have.

Sincerely,

Hydro Resources

Jason Barnum

Jason Barnum
Business Development Manager
Rocky Mountain and West Regions
jbarnum@hydroresources.com

BID SCHEDULE
Arapahoe Well 27R

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENSION
1	Wellhead Completion	L.S.	1	\$ 1,000.00	\$ 1,000.00
2	Mobilization and Cleanup	L.S.	1	\$ 176,000.00	\$ 176,000.00
3	Drilling 20.0-inch Diameter	L.F.	1685	\$ 116.00	\$ 195,460.00
4	Casing				-
	a. 30-inch Diameter Conductor	L.F.	40	\$ 400.00	\$ 16,000.00
	b. 12-inch Diameter Carbon Steel	L.F.	900	\$ 76.00	\$ 68,400.00
	c. 12-inch Diameter Stainless Steel	L.F.	380	\$ 260.00	\$ 98,800.00
5	Well Screen Assembly	L.F.	390	\$ 215.00	\$ 83,850.00
6	Gravel Pack				-
	a. 8-12 Silica Sand	L.F.	10	\$ 32.00	\$ 320.00
	b. 4508R Glass Beads (10-8)	M.T.	34	\$ 2,750.00	\$ 93,500.00
7	Grout Seal	L.F.	1250	\$ 48.00	\$ 60,000.00
8	Well Development				-
	a. Circulation and airlift	HR.	52	\$ 613.00	\$ 31,876.00
	b. Jetting	HR.	30	\$ 600.00	\$ 18,000.00
9	Geophysical Logging				-
	a. resistivity, single point resistance, natural gamma, and caliper, at a minimum	L.S.	1	\$ 9,500.00	\$ 9,500.00
	b. Nuclear Magnetic Resonance Logging (24 inch minimum investigation radius)	L.S.	1	\$ 40,000.00	\$ 40,000.00
10	Well Pumping Test Tests Supply & Install Equipment	L.S.	1	\$ 34,500.00	\$ 34,500.00
	a. 8 – hour Step Test	L.S.	1	\$ 2,600.00	\$ 2,600.00
	b. 72- hour Pumping test	L.S.	1	\$ 21,600.00	\$ 21,600.00
11	Disinfection	L.S.	1	\$ 1,430.00	\$ 1,430.00
12	Video Survey	L.S.	1	\$ 1,450.00	\$ 1,450.00
13	Video Survey – Additional Pass	L.S.	1	\$ 1,450.00	\$ 1,450.00
15	Provide Submersible Pump & Equip (Include description)	L.S.	1	\$ 166,850.00	\$ 166,850.00
16	Nominal 4.5 inch Pump Column Drop Pipe	L.S.	1	\$ 187,000.00	\$ 187,000.00
17	Install Submersible Pump & Equipment	L.S.	1	\$ 15,110.00	\$ 15,110.00
18	Adjustable Frequency Drives (Include description)	L.S.	1	\$ 72,500.00	\$ 72,500.00
					\$ 1,397,196.00

DRILLING TOTAL (IN WORDS)

one million three hundred ninety-seven thousand one hundred ninety-six & 00/100 dollars.

BID SCHEDULE 27R
MANDATORY ALTERNATE ITEMS (Must be bid)

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
Remove pumping equipment and Abandon Existing well	L.S.	1	\$ 44,200.00	\$ 44,200.00
GESC Permitting and Implementation	L.S.	1	\$ 10,000.00	\$ 10,000.00
Drilling Mud/Fluids Removal	L.S.	1	\$ 22,250.00	\$ 22,250.00
Drilling Cuttings Removal	L.S.	1	\$ 13,250.00	\$ 13,250.00
Drilling Hourly Rate (Lost Circulation)	HR	1	\$ 650.00	\$ 650.00
Drilling Hourly Rate (Slow Penetration Rate)	HR	1	\$ 650.00	\$ 650.00
Road Maintenance (Track pad, road sweeping, mud removal)	L.S.	1	\$ 8,500.00	\$ 8,500.00
Step up Transformer	L.S.	1	\$ 19,100.00	\$ 19,100.00
One hour coordination meetings	HR	2	\$ 250.00	\$ 500.00
Water Supply provide backflow meter Allowance (Reimbursed based on actual cost; provide copy of invoice)	Allowance	1	\$ 10,000.00	\$ 10,000.00
Startup at facility completion	L.S.	1	\$ 5,200.00	\$ 5,200.00
Sound Mitigation Include description	L.S.	1	\$ 96,000.00	\$ 96,000.00
<u>Arapahoe Well 27R Extended Conductor Casing Alternative</u>				
Drilling 26-inch Diameter	L.F.	485	\$ 200.00	\$ 97,000.00
Casing (24-inch)	L.F.	485	\$ 185.00	\$ 89,725.00
				\$ 417,025.00

MANDATORY ALTERNATE ITEMS TOTAL (IN WORDS)

four hundred
seventeen thousand twenty-five & 1/2 % dollars

BID SCHEDULE
Araphoe Well 231

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENSION
1	Wellhead Completion	L.S.	1	\$ 1,000.00	\$ 1,000.00
2	Mobilization and Cleanup	L.S.	1	\$ 176,000.00	\$ 176,000.00
3	Drilling 20.0-inch Diameter	L.F.	1705	\$ 116.00	\$ 197,780.00
4	Casing				-
	a. 30-inch Diameter Conductor	L.F.	40	\$ 400.00	\$ 16,000.00
	b. 12-inch Diameter Carbon Steel	L.F.	900	\$ 76.00	\$ 68,400.00
	c. 12-inch Diameter Stainless Steel	L.F.	340	\$ 260.00	\$ 88,400.00
5	Well Screen Assembly	L.F.	450	\$ 215.00	\$ 96,750.00
6	Gravel Pack				-
	a. 8-12 Silica Sand	L.F.	10	\$ 32.00	\$ 320.00
	b. 4508R Glass Beads (10-8)	M.T.	34	\$ 2,750.00	\$ 93,500.00
7	Grout Seal	L.F.	1230	\$ 48.00	\$ 59,040.00
8	Well Development				-
	a. Circulation and airlift	HR.	52	\$ 613.00	\$ 31,876.00
	b. Jetting	HR.	30	\$ 600.00	\$ 18,000.00
9	Geophysical Logging				-
	a. resistivity, single point resistance, natural gamma, and caliper, at a minimum	L.S.	1	\$ 9,750.00	\$ 9,750.00
	b. Nuclear Magnetic Resonance Logging (24 inch minimum investigation radius)	L.S.	1	\$ 40,000.00	\$ 40,000.00
10	Well Pumping Test Tests Supply & Install Equipment	L.S.	1	\$ 34,500.00	\$ 34,500.00
	a. 8 – hour Step Test	L.S.	1	\$ 2,600.00	\$ 2,600.00
	b. 72- hour Pumping test	L.S.	1	\$ 21,600.00	\$ 21,600.00
11	Disinfection	L.S.	1	\$ 1,430.00	\$ 1,430.00
12	Video Survey	L.S.	1	\$ 1,450.00	\$ 1,450.00
13	Video Survey – Additional Pass	L.S.	1	\$ 1,450.00	\$ 1,450.00
15	Provide Submersible Pump & Equip (Include description)	L.S.	1	\$ 166,850.00	\$ 166,850.00
16	Nominal 4.5 inch Pump Column Drop Pipe	L.S.	1	\$ 187,000.00	\$ 187,000.00
17	Install Submersible Pump & Equipment	L.S.	1	\$ 15,110.00	\$ 15,110.00
18	Adjustable Frequency Drives Include description	L.S.	1	\$ 72,500.00	\$ 72,500.00
					\$ 1,401,306.00

DRILLING TOTAL (IN WORDS)

one million four hundred one thousand three hundred six & 00/100 dollars

BID SCHEDULE 231
MANDATORY ALTERNATE ITEMS (Must be bid)

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
GESC Permitting and Implementation	L.S.	1	\$ 10,000.00	\$ 10,000.00
Drilling Mud/Fluids Removal	L.S.	1	\$ 22,250.00	\$ 22,250.00
Drilling Cuttings Removal	L.S.	1	\$ 13,250.00	\$ 13,250.00
Drilling Hourly Rate (Lost Circulation)	HR	1	\$ 650.00	\$ 650.00
Drilling Hourly Rate (Slow Penetration Rate)	HR	1	\$ 650.00	\$ 650.00
Road Maintenance (Track pad, road sweeping, mud removal)	L.S.	1	\$ 8,500.00	\$ 8,500.00
Step up Transformer	L.S.	1	\$ 19,100.00	\$ 19,100.00
One hour coordination meetings	HR	2	\$ 250.00	\$ 500.00
Water Supply provide backflow meter Allowance (Reimbursed based on actual cost; provide copy of invoice)	Allowance	1	\$ 10,000.00	\$ 10,000.00
Startup at facility completion	L.S.	1	\$ 5,200.00	\$ 5,200.00
Sound Mitigation Include description	L.S.	1	\$ 76,750.00	\$ 76,750.00
<u>Arapahoe Well 231 Extended Conductor Casing</u>				
<u>Alternative</u>				
Drilling 26-inch Diameter	L.F.	325	\$ 200.00	\$ 65,000.00
Casing (24-inch)	L.F.	325	\$ 180.00	\$ 58,500.00
				\$ 290,350.00

MANDATORY ALTERNATE ITEMS TOTAL (IN WORDS)

two hundred ninety thousand three hundred fifty & 00/100 dollars

Water Well



Client:	Town of Castle Rock	Client Name:	
Address 1:		E-Mail:	
Address 2:		Office Phone:	
City:		Cell Phone:	
State:		Job Number:	Wells 27R & 231
Zip:		Date:	September 20, 2019

Tubing Size:	4 1/2" x 10.5 (lb/ft)		Target Freq:	60.0	Hz
Casing Size:	10 3/4" x 40.5 (lb/ft)		Pump:	SH13000 AR	
Temp:	70	Degree F	# Of Stages:	18	
Pump Depth:	1650	Feet	Stage Required	18	
TDH:	1500	Feet	Motor Seal:	513-BsBsL-HL	
Min Flow:	150	GPM	Motor:	562 - 180 HP, 2290 V, 43 A	
Target Flow:	325	GPM	Mtr Required	176 HP at 60 Hz. Rating	
Max Flow:	350	GPM	Cable Size:	2 AWG	
VFD Increments	5	Hertz	VFD	217 KVA, 480 V, 261A	
Max Surface KVA				164	

Results

	Min Flow 150 GPM	Target Flow 325 GPM	Max Flow 350 GPM
Frequency	55.2	60.0	60

Pump

Pump Power	105 HP (79 kW)	165 HP (123 kW)	171 HP (127 kW)
HSG Burst	Std 21.3% (HS 17.8%)	Std 25.2% (HS 21%)	Std 25.2% (HS 21%)
Shaft Load	Std 15.9% (HS 9.7%)	Std 22.9% (HS 13.9%)	Std 23.7% (HS 14.5%)
Max Thrust	709 Lbs	837 Lbs	837 Lbs

Motor Seal

Shaft Load	Std 18.2% (HS 10.9%)	Std 26.2% (HS 15.7%)	Std 27.2% (HS 16.3%)
Thrust Load	19.5 %	19.5 %	19.5 %
Fluid Expansion	122.8 %	159.8 %	164.5 %

Motor

Op Load	63.7%	91.4%	94.9%
Skin Temp	72.9 F (22.7 C)	72.8 F (22.7 C)	72.9 F (22.7 C)

Cable

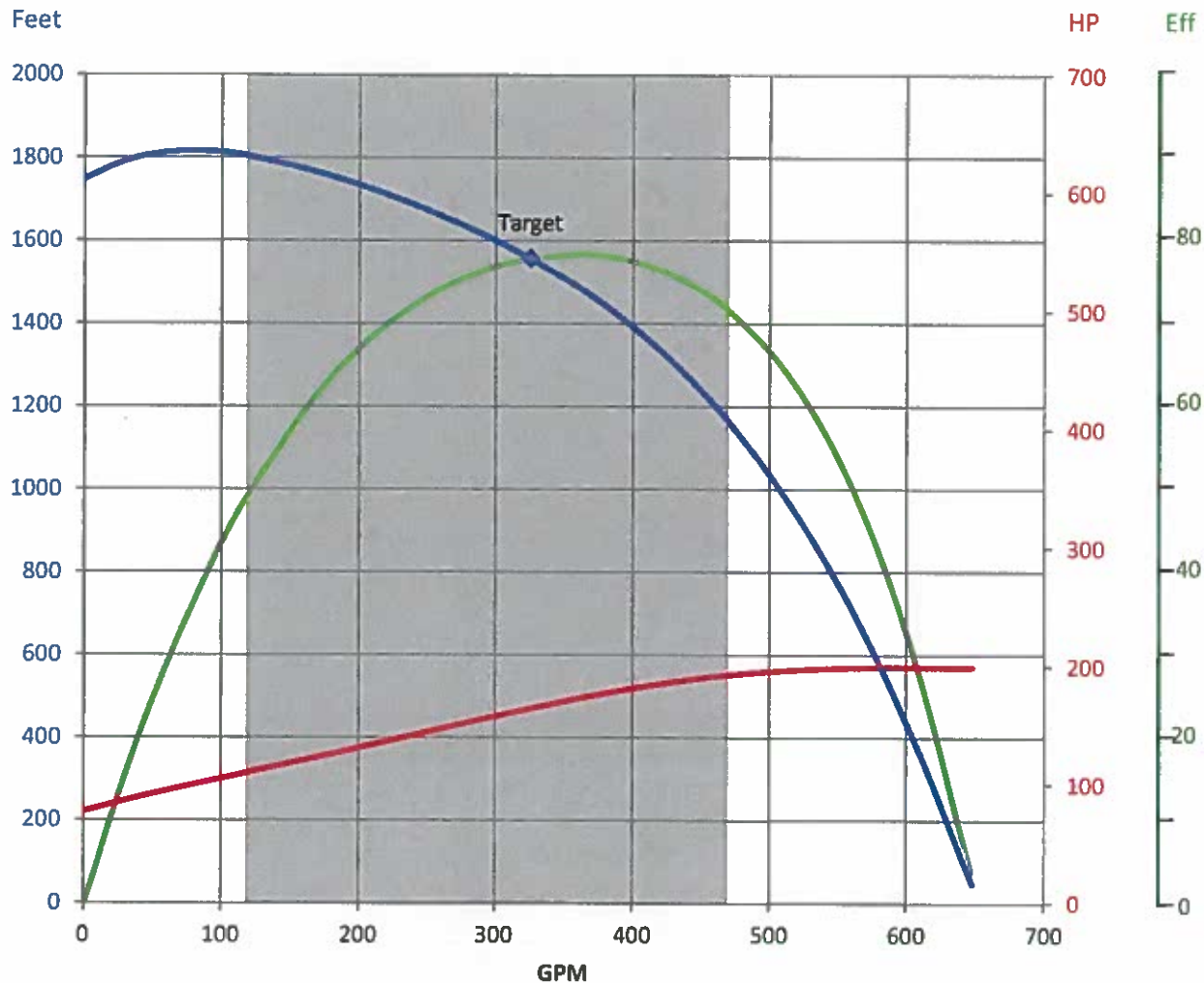
Volt Loss	13.2	19	19.8
Power Cost	0.6 kW (0.8 HP)	1.3 kW (1.7 HP)	1.3 kW (1.8 HP)

Surface

Volts	2120	2309	2310
KVA	101	158	164
kW/H	154	163	162



Summit SH13000 AR, 18 Stage, 3410 RPM



SH13000 AR - 60 Hertz Best Efficiency Point (BEP) Data

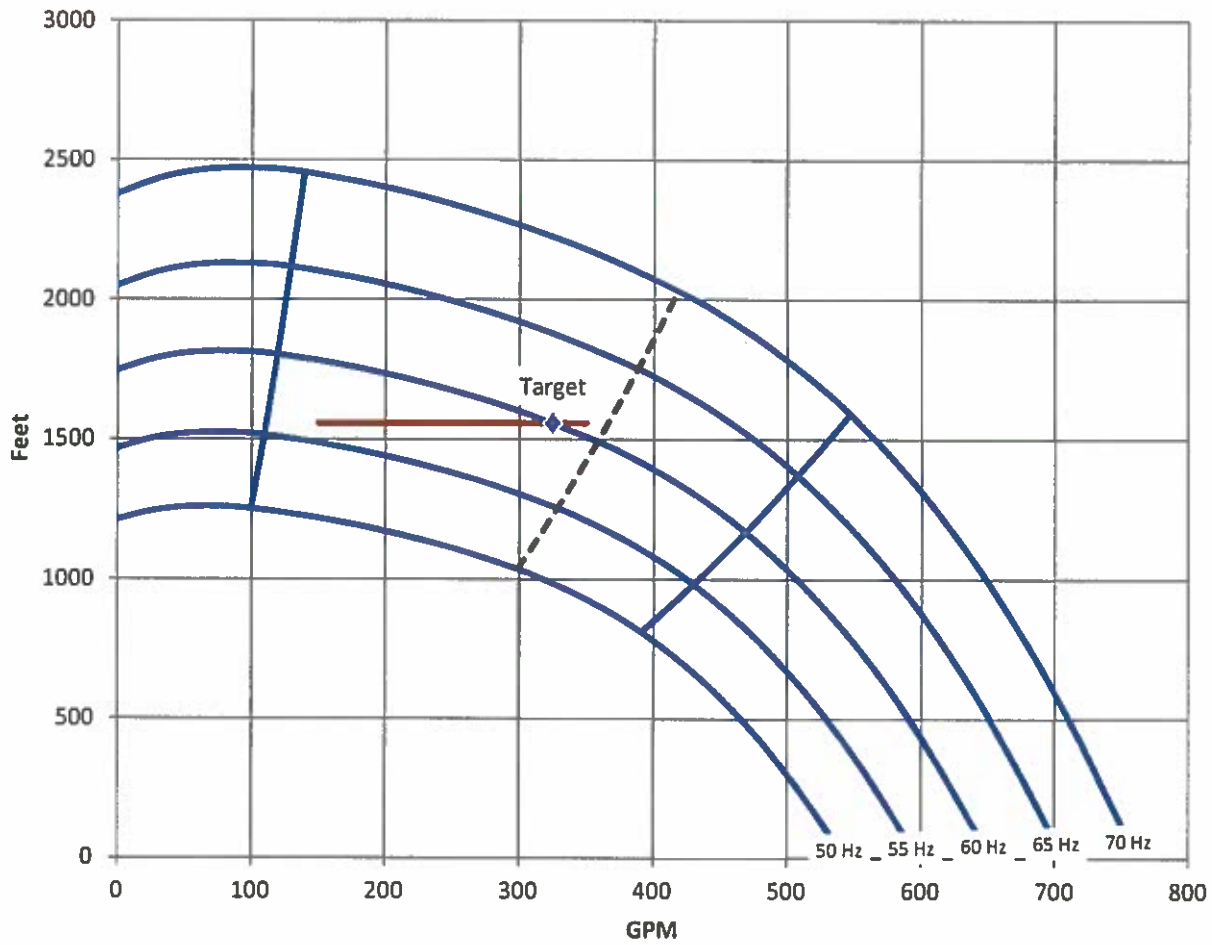
Optimum Flow Rate (GPM)	367.8	Power per Stage (HP)	10.40
Operating Range (GPM)	122.5 - 481.1	Efficiency (%)	78.3
Head per Stage (Feet)	87.4		

SH13000 AR - Engineering Data

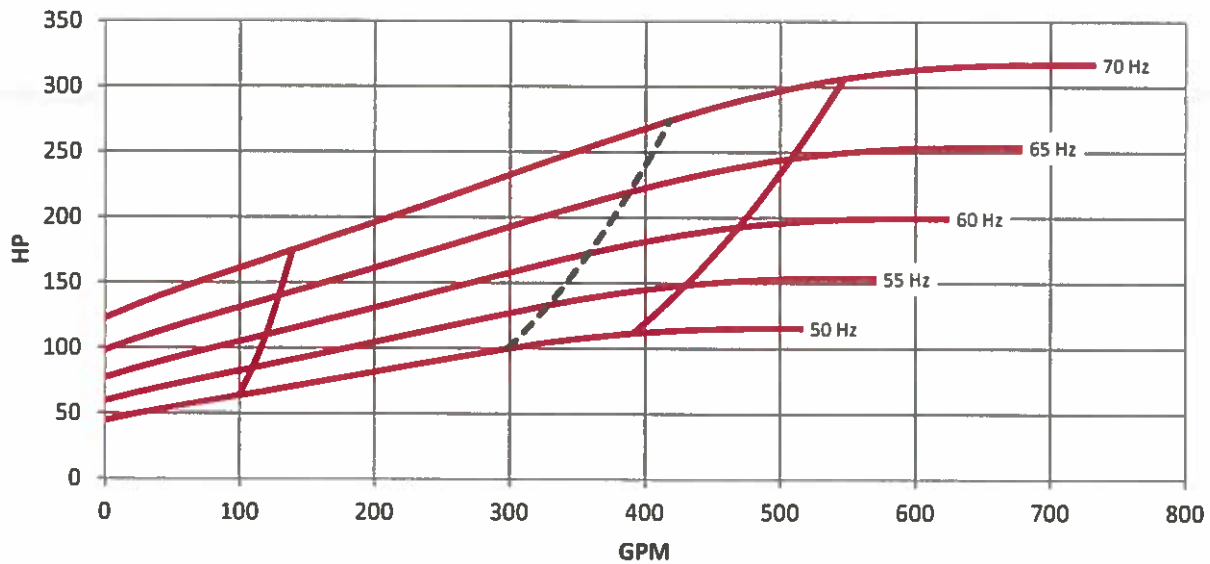
Nominal Casing Size (Inch)	8 5/8	Rotational Direction	CCW
Housing Diameter (Inch)	6.75	Shaft Diameter (Inch)	1.187
Housing Pressure Limit (PSI)		Shaft Power Limit (HP)	
Standard	3000	Monel	720
High Pressure	3600	Inconel	1180
		Stage Type	Mixed



Summit SH13000 AR, 18 Stage, Multi Frequency Head



Summit SH13000 AR, 18 Stage, Multi Frequency Power



SAMPLE CONTRACT FORMS

INDEX

CHANGE ORDER

CONTRACTOR'S CERTIFICATE AND RELEASE

PERFORMANCE BOND

LABOR AND MATERIAL PAYMENT BOND

NOTICE OF AWARD

NOTICE TO PROCEED

NOTICE OF SUBSTANTIAL COMPLETION

NOTICE OF CONSTRUCTION COMPLETION

REQUEST FOR PAYMENT

NOTICE OF FINAL ACCEPTANCE

CHANGE ORDER NO. _____

Date _____

Project _____

Project Number _____

P.O. Number _____

Bid Number _____

Contractor _____

The following changes are made to the Contract:

Attach support documentation to this Change Order. If paying on multiple accounts and/or project numbers, attach a memo detailing each number and related dollar amount.

Is this Change Order strictly a quantity adjustment? YES NO

The Original Contract Price was..... \$

Net Change by Previous Change Orders \$

Contract Price Before this Change Order \$

CURRENT Change Order AMOUNT (note + or -) \$

THE NEW CONTRACT PRICE WILL BE..... \$

Original contract time: _____ days

Net time change by previous Change Order(s): _____ days

Net adjustment due to this Change Order: _____ days

Current contract time including this Change Order: _____ days

DATE FOR SUBSTANTIAL COMPLETION WILL BE: _____

The contractor hereby certifies that all work specified in this Change Order shall be performed according to the original contract requirements except as modified by Change Order(s).

TOWN DIVISION APPROVAL

TOWN DIVISION APPROVAL

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

TOWN DIVISION APPROVAL

CONTRACTOR

By: _____

By: _____

Title: _____

Its: _____

Date: _____

Date: _____

Originals: Contractor; Purchasing and Contract File

CONTRACTOR'S CERTIFICATE AND RELEASE

FROM: _____
(Contractor)

TO: TOWN OF CASTLE ROCK
100 Wilcox Street
Castle Rock, CO 80104

Project Name _____

Bid Number _____ Project No. _____

Agreement for Construction Contract dated _____, 20____.

1. The Contractor certifies that the Town of Castle Rock owes the Contractor the amount of _____
_____ DOLLARS for duly approved Change Orders and modifications under the Contract.

2. The Contractor further certifies that in addition to the amount set forth in Paragraph 1, the following claims are just, due and owing by the Town of Castle Rock to the Contractor:

- (a) _____
 - (b) _____
 - (c) _____
 - (d) _____
- (Itemize claims and amounts due. If none, so state.)

3. The Contractor certifies that it has performed all Work required by and according to the Contract, including Work required under Change Orders numbers _____ through _____, and that there are no unpaid claims for materials, supplies or equipment and no claims of laborers or mechanics for unpaid wages arising out of the performance of the Contract, and that the wage rates paid by the Contractor and all Subcontractors conform to applicable laws and regulations.

4. Except for the amounts stated under Paragraphs 1 and 2 hereof, the Contractor has received from the Town of Castle Rock all money payable to the Contractor under the Contract, as modified.

5. In consideration of the payment of the amount in Paragraph 1 the Contractor hereby releases the Town of Castle Rock from any claims arising under or by virtue of the Contract, except the amount(s) listed in Paragraph 2; provided, however, that if for any reason the Town of Castle Rock does not pay the amount stated in Paragraph 1 in full, the deduction shall not affect the validity of this release, but the deducted amount shall be automatically included under Paragraph 2 as an amount which the Contract has not released but will release upon payment. The Contractor certifies that, upon the payment of the amount in Paragraph 2, and of any amount which may be deducted for claims of any nature arising out of the Contract, as modified, the Contractor shall execute such further releases or assurances as the Town may request.

Executed this _____ day of _____, 20____.

Contractor _____

By: _____

Its: _____
Title

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That _____
(full name and address or legal title of Contractor)
_____ as Principal,

hereinafter called Contractor, and as Surety, _____
(full name and address or legal title of Surety)

hereinafter called Surety, are held and firmly bound unto _____
(full name and address or legal title of Owner)

as Obligee, hereinafter called Owner, in the amount of _____
Dollars

(\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 20____, entered into a contract with Owner for _____, Project No. _____

in accordance with Drawings and Specifications prepared by the Town of Castle Rock, 100 Wilcox Street, Castle Rock, Colorado, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Surety hereby waives notice of any alteration of the contract or extension of time made by Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or;
2. Obtain a bid or bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this _____ day of _____, 20__.

Witness

Title

Witness

Title

Principal

Title

Title

Title

LABOR AND MATERIAL PAYMENT BOND

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER
CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

KNOW ALL MEN BY THESE PRESENTS: That _____
(full name and address or legal title of Contractor)

_____ as Principal, hereinafter called
Principal, and _____

(full name and address or legal title of Surety)
as Surety, hereinafter called Surety, are held and firmly bound unto _____

_____ (full name and address or legal title of
Owner)

_____ as Obligee, hereinafter called Owner, for the
use and benefit of claimants as herein below defined, in the amount of _____ Dollars (\$ _____),
for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____ 20____,
entered into a contract with Owner for _____

(description of project)
in accordance with Drawings and Specifications prepared by the Town of Castle Rock, 100 Wilcox Street, Castle Rock,
Colorado, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make
payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the
performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect,
subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for
labor, material or both, used or reasonably required for use in the performance of the Contract, labor and material
being construed to include that part of water, gas power, light heat, oil, gasoline, telephone service or rental of
equipment directly applicable to the Contract.
2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as
herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on
which the last of such claimant's work or labor was done or performed, or materials were furnished by such
claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgement for such sum or
sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment
of any costs or expenses of any such suit.

No suit or action shall be commenced hereunder by any claimant:

- a. Unless claimant, other than one having a direct contact with the Principal, shall have given written notice to
any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after
such claimant did or performed the last of the work or labor, or furnished the last of the materials for which
said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom
the materials were furnished, or for whom he worked or labor was done or performed. Such notice shall be
served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to
the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of
business, or served in any manner in which legal process may be served in the state in which the aforesaid
Project is located, save that such service need not be made by a public officer.

- b. After the expiration of six (6) months following the date on which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
- c. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof is situated, or it the United States District Court for the District in which the Project, or any part thereof, is situated, and not elsewhere.

Signed and sealed this _____ day of _____, 20____.

Witness

Principal

Title

Title

Witness

Title

Witness

Title

NOTICE OF AWARD

Project Name Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project

Number _____ Project No. _____

Date of Notice of Award _____

TO: _____

The Town of Castle Rock Project Manager has considered Bids for the above Project in response to its Invitation to Bidders. The Town accepts your Bid for the Work in the amount of _____ DOLLARS.

You must sign the Agreement for a Construction Contract with the Town of Castle Rock and furnish complying insurance evidence and applicable Performance and Labor and Material Payment Bonds within **ten** days from the date of delivery of this NOTICE to you.

If you fail to sign the Agreement for a Construction Contract or furnish the bonds and insurance within **ten** days from the date of delivery of this NOTICE, the Town may consider all your rights under the Town's acceptance of your Proposal as abandoned. Your Bid Guarantee shall become the property of the Town as liquidated damages, not as penalty, for any delay of construction. The Town may award or re-advertise the Work, or act otherwise, as its discretion.

TOWN OF CASTLE ROCK

Project Manager

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged this _____ day of _____, 20____.

CONTRACTOR SIGNED: _____

BY ITS: _____
Title

NOTICE TO PROCEED

Project Name: Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project Bid

Number: _____ Project Number: _____

Date of Notice to Proceed: _____

To: _____

Please take notice that:

The Contractor and the Town have signed the Contract for the Project and the Contractor has submitted the items requested prior to the beginning of the Work for the Contract.

The Town has approved the Contract.

Therefore, as the Contractor for the above-described work, you are hereby authorized and directed to proceed within ten days from receipt of this NOTICE, as required by the Contract.

Contract Purchase Order Number: _____ *

*Reference this purchase order number, project name, and project number on all invoices and pay request forms.

*Submit all pay requests on approved forms.

Completion Date _____

TOWN OF CASTLE ROCK

Project Manager

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged this

day of _____, 20____.

CONTRACTOR

SIGNED: _____

BY ITS: _____

Title

NOTICE OF SUBSTANTIAL COMPLETION

Project Name Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project Project

Number _____ Date of Substantial Completion _____

Contractor _____

PROJECT OR SPECIFIED PART OF PROJECT WHICH IS SUBSTANTIALLY COMPLETE:

The Work performed under this Contract has been inspected by authorized representatives of the Town, Contractor, and the Project (or specified part of the Project, as indicated above) is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. This list may not exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work according to the Contract.

These items shall be completed by the Contractor within _____ days of the date of Substantial Completion.

AUTHORIZED BY: _____
Project Manager

ACKNOWLEDGED BY: _____
Contractor

NOTICE OF CONSTRUCTION COMPLETION

Project Name Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project Project

Number _____ Date of Construction Completion _____

To: _____

Please take notice that the Town of Castle Rock has accepted the construction work for the Project, as complete.

In conformance with Contract, your obligations and guarantees will continue until _____, 20____.

Please reference the project name and number stated above and submit your invoice for final payment (in duplicate) to the Project Manager.

TOWN OF CASTLE ROCK

By: _____

Title: _____

Date: _____

Originals: Contractor

Copies: Project Manager

REQUEST FOR PAYMENT NO. _____

Project Name Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project

Project Number _____ P.O. Number _____ Bid Number _____

Final Payment YES_ NO_ If yes, the Notice of Project Construction Completion must be fully completed and signed by the Town of Castle Rock and the Contractor.

Contractor _____ Project Manager _____

Payment Period from _____ to _____

Original Contract Price	\$ _____
Net change by Change Orders	\$ _____
Contract Price to date	\$ _____
Total completed & stored to date	_____ %
Retainage	_____ % of \$ _____
Total earned less retainage	\$ _____
Less previous certificates for payment	\$ _____
CURRENT PAYMENT DUE	\$ _____
Pay on account #	_____

Previous Payment Summary:

Payment #1: \$ _____	Payment #4: \$ _____
Payment #2: \$ _____	Payment #5: \$ _____
Payment #3: \$ _____	Payment #6: \$ _____

Change Order Summary:

Number _____ Date Approved _____ Additions _____ Deductions _____

Change Order(s) Total +/- \$ _____ CURRENT COMPLETION DATE: _____

The Contractor certifies that the work covered by this Request for Payment has been completed according to the Contract and that the current payment shown here is now due.

WILDCAT CONSTRUCTION

TOWN OF CASTLE ROCK

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

Originals: Contractor

Copies: Project Manager

TOWN PROJECT FINAL ACCEPTANCE

Project Name Wells CR-27R and CR-231 Drilling, Completion, and Equipping Project Project

Number _____ Project Final Acceptance Date _____

To: _____

Please take notice that the Town of Castle Rock accepts the Project as complete and hereby formally accepts the project for operation and maintenance as part of the Town of Castle Rock's infrastructure.

TOWN OF CASTLE ROCK

By: _____

Title: _____

Date: _____

CONTRACTOR

By: _____

Its: _____

Date: _____
