TOWN OF CASTLE ROCK CONSTRUCTION CONTRACT

THIS CONSTRUCTION CONTRACT (Contract) is made at the Town of Castle Rock, Colorado, between the Town of Castle Rock, Colorado (Town), a municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 and https://example.co.org/hydro.nc/ (Contractor) a Delaware corporation, whose address is 13027 County Road 18. Unit C Fort Lupton, CO 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. The following Addenda, if any:

Number 1 Date January 12, 2018 Pages 4

5. Special Conditions of the Contract:

Document Title Pages

6. The following Specifications:

Town of Castle Rock Municipal Code Well Specifications

7. The following Drawings:

15R Preliminary Well Design 16R Preliminary Well Design

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

- 11. Notice of Substantial Completion;
- 12. Notice of Construction Completion;
- 13. Proposal Forms, including Bid Schedules;
- 14. Performance, and Labor and Material Payment Bonds;
- 15. Performance Guarantee; and
- 16. 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 \$(1,241,535) one million, two hundred forty-one thousand, five hundred and thirty-five and 00/100 DOLLARS, (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) 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 14 calendar days, and must complete work within 131-working days from and including the date of Notice to Proceed, according to the General Conditions. The Work should be completed by July 2, 2018.

LIQUIDATED DAMAGES. If the Contractor fails to substantially complete the Work by the date set for substantial 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.

TOWN OF CASTLE ROCK
Jennifer Green, Mayor
ppropriate)

OFFICE OF THE SECRETARY OF STATE OF THE STATE OF COLORADO

CERTIFICATE OF FACT OF GOOD STANDING

I, Wayne W. Williams, as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office,

Hydro Resources - Rocky Mountain, Inc.

is an entity formed or registered under the law of Delaware has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 20031009865.

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 08/07/2017 that have been posted, and by documents delivered to this office electronically through 08/08/2017 @ 14:21:11.

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 08/08/2017 @ 14:21:11 in accordance with applicable law. This certificate is assigned Confirmation Number 10383131 .



Maynen Williams

Secretary of State of the State of Colorado

************End of Certificate************************

Notice: A certificate issued electronically from the Colorado Secretary of State's Web site is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's Web site, http://www.sos.state.co.us/biz/CertificateSearchCriteria.do entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our Web site, http://www.sos.state.co.us/click"Businesses, trademarks, trade names" and select "Frequently Asked Questions."

BID PROPOSAL

PROJECT: Wells CR-15R and CR-16R Drilling, Completion and Equipping Project

In compliance with your Invitation to Bid, and a Hydro Resources - Rocky Mountain, Inc.	subject to all conditions thereof, the undersigned:
	are, a partnership, / limited partnership, (select, whose general partner(s) is/are
-OR- a sole proprietor, whose trade name is	
in the Town of, State of Proposal for the construction of all items listed at attached Bid Schedule lists the various divisions of Specifications, together with an estimate of the unitem, using the cost inserted in the unit column.	of, offers this Bid the prices shown on the following Bid Schedule. (The
, _, _ , _ , _ , _ , _ , _ , _ , _ ,	

- 2. The undersigned Bidder declares and stipulates that this Bid is made in good faith, without collusion or connection with any other person or persons bidding for the same Work, and that it is made subject to all the terms and conditions of the Invitation to Bids, Information and Instruction for Bidders, and Construction Contract General Conditions, the Agreement for a Construction Contract, the Technical Specifications, and the Plans pertaining to the Work to be done, all of which have examined by the undersigned
- 3. Accompanying this Bid is a Bid Guarantee for 5% of the total Bid amount according to the Invitation to Bids and Information and Instructions to Bidders.
- 4. The undersigned Bidder agrees to execute the Agreement for a Construction Contract, a Performance Bond and a Labor and Material Payment Bond within ten days from the date when the written Notice of Award is delivered at the address given on this Bid Proposal. The Performance Bond and Labor and Material Payment Bond shall each be for the amount of the total of this Bid and shall be from the same surety. The name and address of the corporate surety through which the Bidder proposes to furnish the specified Bonds is as follows: Arch Insurance, Bowen, Miclette & Briti Agent 1100 Poydras Street New Orleans, LA 70163
- 5. The submission of the Bid constitutes an agreement, and it shall not be withdrawn after the Bid Opening for a period of thirty days.
- 6. All the various phases of work enumerated in the Contract with individual jobs and overhead, whether specifically mentioned or not, are included by implication or appurtenance in the Contract. The Contractor shall perform all the various phases of work under one of the items listed in the Bid Schedule, irrespective of whether it is named in the Schedule.
- 7. Payment for the Work performed will be according to the Bid Schedule, subject to changes as provided in the Contract.

8. The undersigned Bidder hereby acknowledges receipt of addenda numbers 1 through 1

RETURN BID TO:

TOWN OF CASTLE ROCK CASTLE ROCK WATER 175 Kellogg Court Castle Rock, CO 80109

The undersigned, being familiar with the existing conditions on the project area affecting the cost of the Work and the Contract Documents, and having verified the quantities and the availability of materials and labor, hereby proposes to furnish all supervision, labor, materials, machinery, tools, appurtenances, equipment, supplies, and services, including utility and transportation service required to construct and complete the Project listed above, according to the Contract, within the time specified, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract of which this Bid is a part.

(The approximate quantities of Work to be completed in-place under the Contract are identified in the Bid Schedule and are for the purpose of comparing Bids. These quantities have been estimated and the quantities used are for the general information of the Bidder, representing the major items of the Work to be done. Minor details are not listed but shall be part of the complete Contract.)

9. The undersigned agrees to hold firm the Bid for thirty days for the purpose of the Town reviewing the Bids and investigating the qualifications of the Bidders prior to award of Contract. Mutually agreed upon extensions of time may be made if necessary.

This proposal is submitted by:

CONTRACTOR: Hydro Resources Rocky Mountain, Inc.

Jacen Decker

ADDRESS: 13027 County road 18 Fort Lupton, CO 80621

TITLE: Drilling Manager

Attest:

DATE: January 18, 2018



January 17, 2018

To Whom It May Concern:

Jasen Decker in his capacity as Drilling Manager of Hydro Resources – Rocky Mountain, Inc. has authorization to sign bid documents as a representative of Hydro Resources Holdings, Inc. for the Castle Rock 15R & 16R project. Should you have any questions, please contact me at our corporate office.

Respectfully,

Mark McWatters

Vice President of Operations 2245 Texas Drive, Suite 250

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Sugar Land, TX 77479

713-622-4033

BID SCHEDULE A CR-15R 10-Inch Completion

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENSION
1.	Wellhead Completion	L.S.	1	\$ 650.00	\$ 650.00
2.	Mobilization and Cleanup	L.S.	I	\$ 86,910	\$ 86,910.00
3.	Drilling 16.0-inch Diameter	L.F.	1,380	\$60.00	\$ 82,800.00
4.	Casing			\$	\$
	a. 24-inch Diameter	L.F.	40	\$ 340.00	\$ 13,600.00
	b. 10-inch Diameter	L.F.	1.070	5 44.00	\$ 47,080.00
5.,	Well Screen Assembly	L.F.	300	\$ 150.00	\$ 45,000.00
6.	Gravel Pack	L.F.	700	\$- 26.00	\$ _25,200.00
7.	Grout Seal	L.F.	680	\$ 43.00	\$ 29,240.00
8.	Well Development	HR.	52	\$ 450.00	\$ 23,400.00
9.	Geophysical Logging (resistivity, single point resistance, natural gamma, and caliper, at a minimum)	L.S.	ą.	\$ 9,340	\$ 9,340.00
10,	Well Pumping Test Tests Supply & Install Equipment	L.S.	ŧ	\$ <u>17,</u> 995	\$ 17,995.00
	a. 8 - hour Step Test	L,S.	1	\$ 1,480	\$ 1,480.00
	b. 72- hour Pumping test	L.S.	I	\$_13,320	\$ 13,320.00
$\Pi_{\mathcal{Z}}$	Disinfection	L.S.	1	\$1,015	\$ 1,015.00
12.	Video Survey	L.S.	1	\$ 1,425	\$ 1,425.00
13.	Video Survey – Additional Pass	L.S.	ì	\$1,425	\$ 1,425.00
14	Pitless Wellheads	L.S.	1	\$ 14,900	\$ 14,900.00
15.	Provide Submersible Pump & Equip (Include descript)	L.S.	1	\$ 76,140	\$ 76,140.00
16.	Nominal 4.5 inch Pump Column Drop Pipe	L.F.	1,200	\$ 9.18	\$ 11,016.00
17.	Install Submersible Pump & Equipment	L.S	1 18	\$ 5,275	\$ 5,275.00
18-	Adjustable Frequency Drives Include description	L.S.	f	\$ 22,770	\$ 22,770.00
19	Abandon Existing CR15	L.S.	1	\$ 10,900	\$ 10,900.00

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BID SCHEDULE A- Continued CR-16R 10-Inch Completion

<u>ITEM</u>	DESCRIPTION	UNIT	OUANTITY	UNIT PRICE	EXTENSION	
1,5	Wellhead Completion	L.S.	1	\$650	\$ 650.00	
_ 2.	Mobilization and Cleanup	L.S.	1	\$ 46,260	\$ 46,260.00	
3.	Drilling 16-inch Diameter	L.F.	690	\$ 60.00	\$ 41,400.00	
4.	Casing			S		
	a. 24-inch Diameter	L.F.	40	\$ 340.00	\$ 13,600.00	
	b. 10-inch Diameter	L.F.	450	\$ 44.00	\$ 19,800.00	
5.	Well Screen Assembly	L.F.	230	\$ 115.00	\$ 26,450.00 \$ 16,740.00 \$ 12,150.00	18 111
6.	Gravel Pack	L.F	465	S-36.00	S 16.740.00 H	As "
-7 .	Grout Seal	L.F.	225	§ 54.00	\$ 12,150.00	
8.	Well Development	HR	52	\$ 450.00	\$ 23,400.00	
• 9.	Geophysical Logging (resistivity, single point resistance, natural gamma, and caliper, at a minimum)	L.S.	1	\$ 9,340	\$9,340.00	
10.	Well Pumping Test Tests Supply & Install Equipment	L.S.	ŀ	\$ 12,955	5 12,955.00	
	a, 8 - hour Step Test	LS	1	\$ 1,200	\$ 1,200.00	
	b. 72- hour Pumping test	L.S.	I	\$ 10,800	\$ 10,800.00	
11.	Disinfection	L.S.	1	\$470	\$ 470.00	27
12.	Video Survey	L.S.	1	\$ 900	\$ 900.00	
13.	Video Survey - Additional Pass	L.S.	1	\$ 900	\$ 900.00	
14.	Pitless Wellheads	L.S.	1	\$ 14,600	\$ 14,600.00	
15.	Provide Submersible Pump & Equip (Include descript)	L.S.	I	\$ 18,280	\$ 18,280.00	
16.	Install Submersible Pump & Equipment	L.S.	1 2	\$ 3,735	\$ 3,735.00	
17.	Nominal 3.0 inch Pump Column Drop Pipe	L.F.	600	\$ 11.64	\$ 6,984.00	
18.	Adjustable Frequency Drives Include description	L.S.	<u> </u>	\$ 17,785	\$ 17,785.00	
19.	Abandon Existing CR16	L.S.	1	\$ 6,980	\$ 6,980.00	

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DRILLING TOTAL (IN WORDS) (\$846,260) Eight hundred, forty six thousand, two hundred and sixty-dollars and 00/100 cents (\$804,320) Eight hundred and four thousand, two hundred and twenty dollars and 00/100 cents

MANDATORY ALTERNATE ITEMS (Must be bid)

REQUIRED ALTERNATE ITEMS

DESCRIPTION	UNIT	<u>OUANTITY</u>	UNIT PRICE	EXTENSION
GESC Permitting and Implementation	L.S.	1	\$ 5,000	\$ 5,000.00
Drilling Cuttings Removal	L.S	1 \$	13,200	\$ 13,200.00
Drilling Hourly Rate (Lost Circulation and Low Penetration Rate)	HR.	J \$	650.00	\$650.00_
Drilling Mud/Fluids Removal	L,S	1 \$	53,800	\$ 53,800.00
Road Maintenance	L.S	I S	5,000	\$5,000.00
Step up Transformer	LS.	2 \$	13,195	\$ 26,390.00
One hour coordination meetings	HR.	3 S	250.00	\$ 750.00
Water Supply provide backflow meter	Allowan	ce I \$	10,000	\$_10.000
Startup for 15R and 16R at Facility Completion	L.S.	1 \$	1,110	\$ 1,110.00
Sound Mitigation (460 linear feet of 16-foot high, and 220 linear feet of 24-foot high acoustical barrier)	L.S.	i \$_	120,300	5 120,300.00°
MANDATOR	-	RED ALTERI TAL	NATE ITEMS	\$ 120,300.00° \$ 236,200.00
	Two hund	red, thirty six t	housand, two hund	lred and 00/100 cents

^{*} Sound Mitigation is based on 3 month rental

MANDATORY ALTERNATE ITEMS (Must be bid)

OPTIONAL ALTERNATE ITEMS (Will be decided before contract award)

Well CR-15R Filter Pack Alternatives Alternative #1:				
Sigmond Linder Glass Beads	M.T.	13	<u>\$ 2,650</u>	\$ 34,450.00
Gravel Pack	LF	400	\$ 40.00	\$ 16,000.00
Alternative #2: Sigmond Linder Glass Beads	M.T.	28	S 2,05 0	S -74,200.00 Hef 125-18
Well CR-16R Filter Pack Alternatives Alternative #1:				
Sigmond Linder Glass Beads	M.T.	16	<u>\$ 2,650</u>	\$ 42,400.00
Gravel Pack	L.F	235	\$ 40.00	\$ 9,400.00
Alternative #2: Sigmond Linder Glass Beads	M.T.	29	\$2,650	\$ _76,850.00 HH 125-18
Cleaning and Epoxy Coating (pump. discharge column pipes)	L,S	ŧ	\$28,765	\$ <u>28,765.00</u>
Nuclear Magnetic Resonance Logging	L.S.	2	\$ 35,000	\$ 70,000.00
Gyroscopic Plumbness and Alignment Logging	L.S.	1	\$ -5,000	5 5,000.00 Helf 12518
Zonal Water Sampling and Falling Head Tests	L.S.	7	\$-20, 600	s_144,200.00 Hiff 125-18

MANDATORY OPTIONAL ALTERNATE ITEMS TOTAL

MANDATORY REQUIRED AND MANDATORY OPTIONAL ALTERNATE ITEMS SUBTOTAL (IN WORDS)

(737,465) seven hundred, thirty seven thousand, four hundred and sixty five dollars and 00/100 cents (\$437,215) four hundred and thirty seven thousand, two hundred and fifteen dollars and 0%00 cents Housand 18

TOTAL PROJECT BID (IN WORDS)

(\$1,583,725) one million, five hundred eighty three thousand, seven hundred and twenty five dollars and

(\$1,241,535.00) one million, two hundred borty-one thousand, five hundred and thirty-five dollars and % cents million.

Notes:

Notes:

L.S. Lump Sum

L.F. Linear Feet

H.R. Hours

M.T. Metric Tons

BIDDER'S QUALIFICATIONS AND DATA

All questions must be answered clearly and comprehensively. If necessary, separate sheets may be attached. The Bidder may submit additional information.

1.	Name of Bidder: Hydro Resources Rocky Mountain, Inc.
2.	Permanent main office address: 13026 County Road 18 Fort Lupton, CO 80621
3.	Phone: 303.857,7540 Fax # 303.857,3826
4.	Bidder's federal tax identification number 56-2306568
5.	The Bidder is organized as a Corporation
6.	The date the Bidder was organized in its current form: January 2010
7.	If a corporation, the state where it is incorporated: Delaware
8.	How many years have you been engaged in the contracting business under your present firm or trade name?
9.	Contract(s) on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dated of completion.)
	Job: Central Utah Water Conservancy District \$: 7,651,200.00 Completion Date: Fall 2018
	Job: Cherokee Metro District \$; 838,930.00 Completion Date: Spring 2018
	Job: Chapel Hill Cometery \$: 276,027.00 Completion Date: Winter 2018
	Job: Town of Castle Rock \$: 1,490,455.00 Completion Date; Spring 2018
10.	General character or work performed by your company: Well Drilling, Construction/Completion, Permanent Equipment Istallation, Testing, Development, Controls Design & Installation
11.	Have you ever been debarred or suspended by a government from consideration for the award of contracts? No If so, where and why?
12.	Have you ever been charged liquidated damages on a contract? № If so, where and why?
13.	List your major equipment AVAILABLE FOR THIS PROJECT: Please see attached documents
14.	Experience in construction work similar in contract price to this project:
	a. Job/\$ Central Utah Water Conservancy District 5 Well Project / \$8,642,300.00
	Contact Name/Phone Hansen Allen & Luce William Bigetow 801.566.5599

	b.	Job/\$ Milrace-Wirthlin, UT Production - Explorat	ory Weils (2)	/ \$1,299,500.00
		Contact Name/Phone Caldwell Richard Sor	enson Mark Chandler	801.359.5565
	C	Job/\$ Sterling Ranch Water LLC		/ \$1,047,096.00
		Contact Name/Phone JDS Hydro Consultar	its Mark Volles 719 22	7.0072
15.	Alton Che Mark McV Michael J Jasen De	ound and experience of the principal mentary. President & CEO Natters, Vice President/Operations ohn Taylor, Region Manager - See attached CV cker, Drilling/Project Manager - See attached CV ader, Drilling Rig Supervisor - See attached CV	mbers of your orga	anization, including officers:
16.	Bonding	g Limit: \$ 25,000,000.00		
17.	Bonding	Company: Arch Insurance Company		Phone # 504.599.8817
	Address	2711 North Haskell Avenue Ste. 500 Dallas, TX Contact, Rita Gulizo	75204	
18	Amegy B	eference(s): lank of Texas Contact: Brian Schexnader 713 2 27459 TX 77227	32,1029	
19	Will you that may	, upon request, complete a detailed finar y be required by the Town of Castle Rocl	ncial statement an Yes</td <td>d furnish any other information</td>	d furnish any other information
20.	informat	lersigned hereby authorizes and request tion requested by the Town of Castle Roo s Qualifications and Data.	s any person, firm ck in verification o	or corporation to furnish any find the recitals in this statement of
CONTR	ACTOR	Hydro Resources Rocky Mountain, Inc.	BY: 1/2	D/
ADDRE	SS:_1302	6 County road 18 Fort Luptom, CO 80621	ITS: Drilling Manag	
Attest				Title
SECRE	TARY:	(if corporation)	DATE:	/18/2018

BIDDER'S OFFICIALS DATA

Bidder's name Hydro Resources Rocky Mountain, Inc.
For each officer of a corporation, partner of a firm, or owner of a sole proprietorship, provide the following information: (Use additional sheets as necessary.)
Name Alton Cherry
Title CEO
Home address 22051 Rustic Canyon Lane
Town, State, Zip Richmond, TX 77469
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government? No
Name Albert Mark McWatters
Title Vice President of Operations
Home address 21527 Aurora Park Drive
Town, State, Zip Richmond, TX 77406
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a government? No
Name Justin Trurig
Title Vice President of Finance
Homo address 2706 Peran Court
Fown, State, Zip Missouri City, TX 77459
Other companies with whom this person has been affiliated in last 10 years
las that company ever been disbarred or suspended from participation in the award of contracts with a government?
Name
itle
Home address
own, State, Zip
Other companies with whom this person has been affiliated in last 10 years
las that company ever been disbarred or suspended from participation in the award of contracts with a
overnment?

BID BOND

	Hydro Resources - Rocky Mounta	ain, Inc.				
	(insert the full name and address	or legal title o	of the Contra	ctor) as Principa	ıl,	
	and, <u>Arch Insurance Company</u> (insert the legal title of the Surety, Missouri , and aut			organized unde		
	office at Harborside 3, 210 Hudson St., \$	Suite 300 Jen	sev City N.11	7311-1107		
	are hereby bound to the Town of Five Per Cent of the Greatest Amount (\$5% G.A.B.) amount the Contractor and Surety and assigns, jointly and severally.	Castle Rock, 1 Bid— DO y bind themse	Colorado, (1 LLARS, in U Ives, their h	own) as Oblige Inited States cur eirs, executors,	administrator	s, successors,
	For construction of the Wells CR-	15R and CR-	16R Drilling	Completion and	<u> Equipping F</u>	roject contract.
	The Town requires, as a condition Guaranty, of at least five percent execute the Agreement for Constrawarded the Contract, that the surpenalty, for the Principal's failure to	of the amount ruction Contra im be paid imi	t of the Bid, act, and furn	conditioned so this is the required	nat if the Prin Bonds if the	cipal fails to Principal is
0	If the Principal, within the specified Town according to the Bid, as accayment Bond with good and suff faithful performance and proper full equidated damages, then this obligened.	cepted, and fu ficient Surety outfillment of the	rnishes a Po or Sureties, e Contract,	erformance Bon- upon the forms or pays to the To	d and a Labo prescribed by own the prope	r and Material the Town for the er amount of
	Executed this 17th day of	January	, 2018,			
Ģ	WITNESS WITNESS			Hydro Resource Control of Control Insurance Control Insurance Control of Cont	-g mana	
	David L. Zabel, Witness		TITLE BY:	RD	Ay	
PLEASE S	EE ATTACHED ACKNOWLEDGMENT		its Attorne	y-in-fact, Richard	Morgan	
	I,am the	(title)		ration named a		, certify that I
	then (title) of the thereto is genuine; and that the bo Corporation by authority of this go	and was duly s	on, that I kno signed, seate	ed the bond on w his or her sign ed, and attested	nature, and th	ne signature
,	(CORPORATE SEAL)	Signed Title	i;			relitie

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Richard Morgan of Greenwood Village, CO

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.000).

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 19th day of November, 2015.

Attested and Certified

Arch Insurance Company

CONTRACTO CONTRA

Missouri

David M. Finkelstein, Executive Vice President

Patrick K. Nails, Secretary

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
HELEN SZAFRAN, Notary Public
City of Philadelphia, Phila. County
My Commission Expires October 3, 2017

Helen Szafran, Notary Public

My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated <u>November 19, 2015</u> on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

Patrick K. Nails, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division 3 Parkway, Suite 1500 Philadelphia, PA 19102



Surety Acknowledgement

THE STATE OF COLORADO

COUNTY OF ARAPAHOE

	This instrument	was acknowle	dged before me	on the <u>17th</u>	day of <u>January</u> ,	2018
	Richard Morgan		Attorney In Fac		Arch Insurance Company	
a	Missouri	corporation, i	n behalf of said _			

SARAH BROWN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20054048718
MY COMMISSION EXPIRES DECEMBER 21, 2021

Notary Public – State of Colorado

Commission Expires: December 21, 2021

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of COloradO)
County of Weld) ss
that: UQSCN DCCKEY , Being duly sworn deposes and says (Insert name)
1. he/she is the DYLLING MOMOCY (Title) of HUNTO ROSOWCES-RKY MI the Bidder that has submitted the attached Bid;
2. He/She is fully informed respecting the preparation and content of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid:
4. Neither the Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, subcontractor, mechanic, materialman, suppliers, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted, or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought agreement, collusion, communication or conference in the attached Bid or any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Castle Rock or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, subcontractor, mechanic, materialman, suppliers, including this affiant.
CONTRACTOR: Hydro Resources Rocky Mountain, Inc. BY:
ADDRESS: 13027 CR 18 Fort Lupton, CO 80621 TITLE: Drilling Manager
Attest:
SECRETARY: DATE: January 18, 2018
(SEAL)
BRITTNEY LEFFORGE NOTARY PUBLIC STATE OF COLORADO

NOTARY ID 20174041564 MY COMMISSION EXPIRES OCTOBER 05, 2021

SUBCONTRACTORS AND RELATED DATA

For each Subcontractor to be utilized please provide the following information (use additional sheets as necessary):

Firm Name: Beharens & Associates	<u> </u>			_
Address: 9536 E. I-25 Frontage Road Longmont, CO 80504	970.535.9000			
Proposed work and percentage of total work to be assigned:	Conductor Drilling			_
		Percentage	5	%
Firm Name: Ludwig Drilling				_
Address: 704 Topeka Way Castle Rock, CO 80109 303.932.7	7500			_
Proposed work and percentage of total work to be assigned:	Sound Wall Installation			_
		Percentage	1.5	%
Firm Name: Schlumberge				
Address: 9251 E. 104th Avenue Henderson, CO 303.439.550	00			
Proposed work and percentage of total work to be assigned				_
		Percentage	1	%
Firm Name: Basic Energy				
Address: Fort Morgan, CO 720.937.3287				_
Proposed work and percentage of total work to be assigned:	Cementing			
		Percentage	5	%
Firm Name; COLOG	<u> </u>			_
Address: 810 Quail Street Ste, E Lakewood, CO 80215 303.279.0	171			_
Proposed work and percentage of total work to be assigned:	Gyro Logging			
		Percentage	1 1	%
Firm Name: PSI				
Address PioneerEnergy Service Hays, KS 785 625.3858	·			_
Proposed work and percentage of total work to be assigned.	Standard Logging			_
		Per	centag	je 1%
Firm Name: O'Brien Pumping Company				
Address: 4388 Windermere Street Englewood, CO 80110 303,778,74	174			
Proposed work and perccentage of total work assigned. Cement pum	ping for well abandonment.	Perc	entage	1%

Reviewed

TOWN OF CASTLE ROCK RESPONSE TO REQUESTS FOR CLARIFICATION NUMBER 1 FOR RFP NO. 2017-09 February 12, 2018

1. When can the project start and when is the final completion?

Response: The project will go to Council on February 6, 2018. Assuming Council approval, the project will be awarded on February 7, 2018. Construction can begin with the Notice to Proceed, likely to be February 21, 2018. The Contractor must begin work covered by the Contract within 14 calendar days, and must complete work within 131 days from the date of Notice to Proceed, according to the General Conditions. **The target date for completion of Work is July 2, 2018.** The Town will work with the Contractor to adjust the completion date based on reasonable conditions encountered.

2. Will additional site land be available for equipment/storage beyond what is designated in the sound wall configuration?

Response: There is some space to the east of the Miller Water Treatment plant than can be used for equipment storage and along the south of the access road by the generator and VFD enclosure. Castle Rock Water staff will work with the HOA on gaining a temporary easement for storage on their site to the south.

- 3. What special considerations will need to be taken to get the water from the fire hydrant that is in the residential neighborhood adjacent to the site? **Response:** There is fire flow in the adjacent building that will be used for water instead of the fire hydrant in the residential neighborhood. (See Photo 1, below) The connection will need to have a backflow preventer and meter and will need layflat hose to the pit.
- 4. Will changes to the contract terms and conditions be allowed? If so, how will this be handled? Response: All desired changes to the contract and conditions will need to be submitted to Castle Rock Water for consideration and review through the Town of Castle Rock's Legal Department.
- 5. Where will the test water be discharged to? Response: The test water will be discharged into the golf course pond to the east or through a lay-flat hose into a stormwater outlet manhole west of the Miller Treatment Plant. Castle Rock Water staff will work with successful bidder and determine which of the two options will occur.

At this time assume that we will need a discharge permit and staff will help with the mapping.

6. The bid documents state earthen and steel above grade pits for drilling operations. Are both allowed or not?

Response: Steel above grade pits will need to be used on this site.

7. Are there any driller's logs available?

Response: Please see the attached driller's logs and completion reports for 15, 16 and 14R.

8. What additional information is available for the 15 and 16 to be abandoned?

Response: Well 15 is lined and the inside diameter is reduced to seven inches near the screen section. Town staff suspect that the casing is also offset in the screen section. Well 16 is lined and the inside diameter is reduced to six inches. Both wells have filled in aquifer and filter pack material. For bidding purposes, assume that the wells are at original completion size.

9. What are the VFD requirements?

Response: Driller supplies the VFD and an electrician (under separate contract) will install during the next phase of the project.

10. When will decision to use glass beads be made?

Response: The decision will be made after the bids are in.

11. Can the existing wells be abandoned first?

Response: Yes.

12. What is the bedrock and type and is there hard rock anticipated during the surface casing drilling?

Response: Depth to bedrock is approximately 40 to 45 feet. Bedrock is Dawson Arkose (interbedded sandstones, siltstones and claystones). Please see attached drilling logs for more information.

13. Does the Contractor supply the VFDs?

Response: Yes, the drilling Contractor will supply the VFDs for each of the wells. There are two cabinets available inside the Miller treatment plant. Castle Rock water staff will demo/salvage the existing equipment in the two cabinets. The following table shows the dimensions of the two cabinets: (see Photo 2 and 3)

Height	Approximately 6 feet
Width	18 inches
Depth	14 inches

14. Will the project site need to be reseeded?

Response: No, reseeding will occur as part of the second phase of the project, under a separate contract.

15. Please clarify that the column pipe lengths can be in more than 20' in length?

Response: Yes

16. What are the revised pump requirements?

Response: The pump requirements below will allow water to be pumped to the Plum Creek Water Purification Facility.

	CR-15R	CR-16R
Flow (GPM)	200	100
Head (FT)	1530	835



Photo 1 Connection to water supply from building





Photos 2 and 3 Existing cabinets

Attachments

- 1. Revised Contract Documents
- 2. 14R Soil boring log
- Well 15 Completion Report
 Well 16 Completion Report

SAMPLE CONTRACT FORMS

INDEX

AGREEMENT FOR A CONSTRUCTION CONTRACT
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



JASEN G. DECKER, Drilling Manager

Hydro Resources - Rocky Mountain, Inc. - Fort Lupton, Colorado

Education -

Mesa State College (1998-2003) Bachelor of Science Degree in Environmental Geology (Honors), focus on hydrogeology and environmental geology, minor in Geographic Information Systems/Global Positioning Systems.

New Mexico Institute of Mining and Technology – (Summer 2003) summer studies - Hydrology graduate program

Professional Summary

Mr. Decker has 19 years' experience in the water industry in domestic commercial and surface water. He has been involved in well design, construction and testing, data collection and data base establishment, field modeling, drill cutting sample sieve analyses for well designs. Drilling experience includes auger, air rotary, mud rotary, casing hammer, reverse rotary and soils drilling techniques, and is a qualified CDL Operator.

1996-1998 Beylik Drilling – Rio Rancho, New Mexico – Drilling rig hand, Driller – Drilling rig hand /helper on various drilling rigs, methods including conventional/reverse mud rotary, air, casing hammer, auger – Driller/operator casing hammer, auger and reverse circulation drilling rigs.

1998-2008 WestWater Associates, Inc. – Montrose, Colorado – Environmental Geologist – geologic/hydrogeologic mapping, water availability studies, contract/specification development and management, well drilling/construction/testing supervision, data collection, testing analysis, surface water studies, and reporting of findings

2008-2010 Tri County Water Conservancy District – Montrose, Colorado – Project Management – 14 mile Pipeline Replacement Project – design review and project design assistant, property easement negotiations and legal filing, GESC permitting and implementation, construction and testing supervision

2010-Current Hydro Resources – Rocky Mountain, Inc. – Fort Lupton, Colorado – Project Management, Drilling Manager – Commercial/Municipal Water Well Construction supervision – drilling project estimator, contract negotiations, project management, materials ordering and coordination, client relations, billing and contract closeout.



Name:

M. John Taylor

Summary:

Over ten years' experience in organization of employees and necessary duties to maintain customer relationship. Invoicing, payment collection, coordinating crews and reviewing necessary corporate reports while maintaining honesty and integrity and performing duties in a timely and efficient manner.

Education/Training:

WEST TEXAS A&M UNIVERSITY, Bachelor of General Studies

Class A Commercial Driver's License, State Drillers & Pump Installers License for Texas (56041KPT), Colorado (1472), Wyoming (COPI101) (COWD129), Utah (866), New Mexico (ES10-385467) and Nebraska (29433), Federal Explosives License holder Efficient in Microsoft Office Suite Trustworthy and Dependable to perform duties. Proficient in customer relations and employee relations

Experience:

Hydro Resources-West, Inc. - Regional Manager

2013- Present, Rocky Mountain

- Responsible for contract review and editing
- Review A/R and A/P
- Communicate and meet with customers in a cordial professional manner
- Communicate with subordinates and maintain cooperate policy
- Ensure that all jobs are done timely and efficiently

Hydro Resources-West, Inc. - AG Manager

2012-2013, Rocky Mountain

- Responsible for the formation and equipping of the new agriculture pump division for Rocky Mountain
- Review billing for jobs performed
- Issue purchase orders and communicate with vendors
- Order necessary inventory items
- · Build customer base by communication and doing job in a timely and cost efficient manner

Hydro Resources-West, Inc. – Branch Manager

2003-2011, Rocky Mountain

- Led Hereford branch in showing a profit within one year of taking over duties.
- Fulfilled municipal contracts within time allowed while maintaining necessary paperwork.
- Organized field crews to perform daily tasks as quickly and efficiently as possible.



- Review the daily invoicing for jobs ensuring that all inventory used was accounted for and priced correctly.
- · Order replacement materials from vendors at the best price and the best quality.

Public Water Jobs Completed:

- •Renew Strategies, Hudson CO, refurbished and installed pumping equipment in eight existing wells. G.C. Stan Javernick Hydro Construction 310-225-2211
- •City of Hereford, TX Drilled, tested and installed pumps in 10 new wells. Engineering firm: Parkhill, Smith and Cooper Engineer: Zane Edwards 806-473-2200
- •City of Canyon, TX Drilled, tested and installed pumps in 7 new wells. Engineering firm: Brandt Engineers Engineer: Kyle Schneiderjan 806-353-7233
- •City of Amarillo, TX Drilled, tested 17 new wells. Engineering firm: Daniel B. Stevens Engineer: Robert Gray 505-822-9400
- •City of Dimmitt, TX Drilled, tested and installed pumps in 2 new wells. Engineering firm: Parkhill, Smith and Cooper Engineer: Eric Lopez 806-376-8600
- •City of Vega, TX Drilled, tested and installed pump in new well. Engineering firm: Brandt Engineers Engineer: Kyle Schneiderjan 806-353-7233
- •City of Amarillo, TX Drilled, tested and installed pumps in 6 new wells (Southwest Well Field) Engineering firm: Parkhill, Smith and Cooper Engineer: Scott Honeyfield 806-376-8600
- •Cargill Meat Solutions Friona, TX Drilled, tested and installed pumps in 2 new wells. Engineering firm: Shaw Environmental Engineer: John Sullivan 432-681-2800

References:

- Stan Javernick (Hydro Construction) 970-225-2211
- •Courtney Hemenway (Hemenway Groundwater Engineering) 303-901-2287
- •Theresa Jehn (Quantum Water) 720-626-7873
- •Mario DiPasquale (JDS Hydro Consultants) 719-227-0072
- •Dan Melcher (Melcher Farms) 307-331-0197
- •Rich Cook (4D Farms) 307-331-2515
- •Dave Dechant (Dechant Farms) 303-717-0060
- Grant Richie (Richie Land and Cattle) 970-799-7741
- •Tracy Schmer (Commerce City) 303-944-7812
- David Richie (Bullz R Us) 970-302-9511
- •Dave Dechant (Dechant Farms) 303-717-0060
- •Frank Cnossen owner Cnossen Dairy 806-290-5111
- Scott Brorman (JAM Farms and Mc6 Feedyard) 806-543-8038
- Cris Grotegut (Grotegut Farms) 806-344-5111
- •Scott Hall (Circle 3 Feedyard & Century Feeders) 806-346-1007
- •Bernie Huseman (Century Feeders) 806-344-4999
- •Edwin Axe (Axe Farms) 806-335-0931
- •Edward Allison (Allison Farms) 806-344-2176
- •Tony Lawson (City of Canyon) 806-655-5011



SHELBY D. RADER 13256 DENEB DR. LITTLETON, CO 80124 303-470-0478

EXPERIENCE

Hydro Resources

Ft. Lupton 8/2012 - Present

- ➤ Rig Supervisor
- Supervising drilling operations and employees on 2 Challenger 320 rigs and a JED rig.
- > Drilling wells in Colorado, Texas, Utah
- > Responsible for time management and supply purchases
- ➤ Completed PEC Safety Awareness course 11/2013

Layne Christensen / Environmental

Denver CO 7/2009 - 8/2012

- ➤ Lead Driller
- > Supervised 3 crews drilling water wells in Colorado, Texas, Utah, California, Nevada And New Mexico
- > Received certifications for CPR, Safety, OSHA Training
- > Attended Well Control School for oil field drilling

Hinkle Drilling

Ft. Lupton, CO 5/2008 - 7/2009

- > Rig Supervisor
- > Supervised drilling opertions and daily work assignments of 9 employees on Challenger
- > Drilled wells in Utah, Texas and Colorado

Layne Christensen / Environmental

Woodland CA (and) Denver CO 7/96 -5/2008

- Class R license
- > 40 hours OSHA/MSHA Training
- > Backhoe Operator
- > Hydro Crane Operator
- > Experienced with a variety of Hydraulic Power Tools
- > Experienced in the use of Torque Tongs



> Mechanically Inclined

Randy Smith Training Solutions- Qualification < Surface> Completion Date=15-Aug 2007 Expiration Date=15-Aug 2009 Course level and Description-Drilling Supervisor

INSTALLER & OPERATOR, Pump Department

1997 - 1999

Set new pumps as well as pulling old pumps.

Equipment:

Rocket-Franck's Explorer 3, 100 ton Work over rig.

SEMCO 12 ton pump rig Smeal 5 ton pump rig Stinger Crain 5 ton

ESP and Reda Electric Submersible Pump's down hole around 900' to 3000' for

Water wells.

> Set and run test pumps using variable speed driven units with ESP. I have experience running pump test, step testing from the start to finish, used log plot to find average drawdown.

DRILLING ASSISTANT, Drilling Operations

1999- 2005

DRILLER - OPERATOR

2005 -Present

Equipment:

Challenger 320 75 ton Rig

Challenger 360 - 100 ton Rigs Conventional & Air Assisted Reverse

Failing 2000 - 25 ton Rig

Denver Gardner 3000 Bucryrus Erie 58L

CME

Conventional & Air Assisted Reverse

Conventional

Air Assisted Reverse Cable Tool Rig Auger rig

George Dinsdale Construction Woodland CA

6/95 - 7/96

> General Construction work including, but not limited to, metal and Wood siding, flooring, door hanging, window framing, roofing.

Geise-Skipworth

Loveland CO 8/93 – 3/95

Post Frame Construction Buildings



> Red Iron Framing

Woodland CA Rice Growers Associations 8/90 - 8/93

- > Small bag line Operator
- Shipping and Receiving
- Fork Lift Operator

Farmers Rice Co-Op

West Sacramento CA 9/89 – 9/90

> Small bag line Operator

Leer West

Woodland CA

8/88 - 8/89

> Camper shell construction - assembly work and repair work

REFERENCES

Furnished upon request

EDUCATION

Woodland High, CA. High school diploma.

Baker Hughes a GE Company



350 N. Cole Creek Dr. Evansville, WY 82636

Project:

Well:

AutographPC example for gassy wells

Customer:

Unknown Unknown

Engineer: Country: Unknown USA

State: County: Well API#:

SA

Comments:

Reservoir Name:

This extra line only shows on reports

Pump: Seal:

34-538FLEX80SSD

513GSB3 DB

Motor: 562X

562XP_ 100HP 1820V/ 34A (60 Hz)

Cable: MLE: #4 CPNF 5kV ,8130ft #5 MLE-KLHT 5kV ,30 0ft

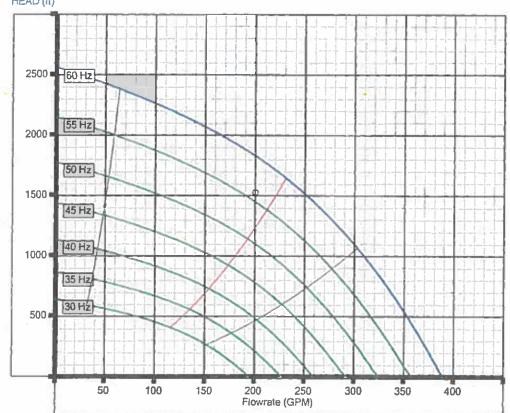
Controller:

VSD 2125-VT 130kVA 480V/ 167A

Sensor: Centinel 3 STANDARD

34-538FLEX80SSD

HEAD (ft)



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Baker Hughes a GE Company 350 N. Cole Creek Dr. Evansville, WY 82636



Gas

Input Parameters:

Fluid Properties Oil Gravity Water Cut SG water SG gas Produced GOR Bot Hole Temp Surf Fluid Temp 150.0 °F	air	Gas Impurities. N2 = 0 % H2S = 0 % CO2 = 0 % Bubble Point Pressure PB = 1854psia	
Inflow Performance		Target. Pump Intake Setting Depth (vertical) Desired Flow Gas Sep Eff Tbg Surf Press Csg Surf Press	1600 ft 200.0 GPM 75.0 % 100.0 psi 100.0 psi
Casing & Tubing, Rough	ness = 0.0006 in		
Casing ID (in) 9.95 Tubing ID (in) 2 992 Vertical Depth (ft) 2000 Measured Depth (ft) 10200			
Correlations PVT: Dead Visc: Kartoamodjo	Saturated Visc: Kartoamodjo	UnderSaturated: Kartoatmodjo	Gas Visc:
Oii Compress: Kartoatmodjo	Formation Vol: Standings	Z factor: Hall & Yarborough	Bubble Point P: Standings
Correlations Multiphase. Tubing Flow: Casing Flow:	Hagedom & Brown Hagedom & Brown		
Comments No comments			
Application Severity, Benign Temperature Abrasives Corrosion	Normal High	Source Extreme	

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Baker Hughes a GE Company



350 N. Cole Creek Dr. Evansville, WY 82636

Operating Parameters / Selection:

Design Point.

Desired flow (total)

% water 99.5 %

% Gas into pump

200.0 GPM

0.0 %GIP /0.0 %GIPbs

TDH

Frequency

56.1 Hz GOR into pump 400.0 scf/STB

1530 ft

Friction Losses 298.5 psi

Pump Selection: Pressure

Specific Gravity

Flowrate

Viscosity

<u>Intake</u> 897.8 psi 200 0 GPM

1.619Cp

0.723 rel-H2O

1.618Cp

Discharge 1428 psi 200.0 GPM 0.809 rel-H2O Pump Selected:

CENTURION 34-538FLEX80SSD

Pshaft RPM = 3235 Shft HP @ 56.1 Hz = 81.62

Shaft load =(Std 25%) / (HS 16%) Required Motor HP at 60.0 Hz = 88.45

#7 Housing 34 stg Flex 80

Seal Selection:

Seal angle (set depth) = 78.69 Deg fm vert.

No sand present

Pump uses floater-type stages Motor/Seal Oil type = CL5

Seat Selected: GSB3 DB [513 Series]

Options : None

Oil temperature at thrust chamber = 218°F

Chamber Cap Used (Top to Bot)=

21% 18% 200%

Thrust bearing load =12 %

Shaft load = 18 %

SEAL GSB3 DB CUW HL CNSF5 NSF_PNT PW VTPN 105150486 NSF01 LUBE OIL CNSF5 55GL DRUM

Motor Selection.

Shaft Load

Terminal Voltage Mator Current Load acc to N.P.

=1651.1 V =30.9 A =88.4 % =9.4 %

Fluid Speed Eff/PF Internal Temp

=13.95ft/s =88.4% / 80.31% =224.1°F

1783.9V

95,5kVA

132.8V

155.1°F

XP

Motor Selected:

100HP 1820V 34A [562Series]

MTR 562XP 100/2300/27 04R PW PN: 105151672-NSF01 *NOTE: Motor ratings at 60Hz

Cable Selection:

Surface Length **Tubing Length** MLE length Surface Temp

Surface Cable

50.0ft 8130ft 30.0ft 100°F

Wellhead Voltage Wellhead kVA Voltage Drop Cond Temp (main)

Temp Rating

205.0°F MLE Cable

#4 CPNF5.0kV 50.0ft

Main Cable #4 CPNF5.0kV 8130ft

#5 MLE-KLHT5.0kV 30.0ft

CENTRILINK 20 055 4PHT 76381 400 F PW

PN: C78718-055-NSF01 or CENTRILINK 20 040 4PHT 76381 400°F P

Controller Selection

Surface KW Input kVA System kW Max Ctrl Current

Power Cost/kWH

78.0kW 90.6kVA 83.1kW 122.7A 0.05\$/kWH = \$2992/month Voltage Input Max Well Head Volts Target Frequency

480.0V 1784V 56.1Hz (8.56V/Hz)

Start Frequency Step-up Trafo

10.0Hz 3.972 ratio

Selected: VSD 2125-VT 130kVA/ 480V/ 167A

Total Power Cost No comments:

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Baker Hughes a GE Company



350 N. Cole Creek Dr. Evansville, WY 82636

Monitoring & Automation

Downhole Sensor Selected: Centinel 3 STANDARD P/N: C902634 Metallurgy:CARBON STEEL Sampling: 17.0 sec/sample

Details.

Intake Pressure:

Range=15 0 to 5000 psia Accuracy= +/- 25 0 psia Resolution= +/- 0.1 psia Limit=7500 psla

Motor Temperature:

Range=77.0 to 500.0 °F Accuracy= +/- 1.8 °F Resolution= +/- 0.18 °F 1000 OHM RTD

Intake Temperature:

Range=77.0 to 302.0 °F Accuracy= +/- 1.8 °F Resolution= +/- 0.18 °F

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Baker Hughes a GE Company 350 N. Cole Creek Dr. Evansville, WY 82636

Pump:

Seal:

Motor:

Cable:

Sensor:

MLE:

34-538FLEX80SSD

#5 MLE-KLHT 5kV ,30 Oft Controller: VSD 2125-VT 130kVA 480V/ 167A

Centinel 3 STANDARD

562XP_ 100HP 1820V/ 34A (60 Hz) #4 CPNF 5kV ,8130ft

513GSB3 DB



Project: Customer: AutographPC example for gassy wells

Unknown

Well: Engineer: Unknown Unknown USA

Country: State: County:

Well API#: Reservoir Namo:

Comments:

This extra line only shows on reports

Well remarks:

No comments

Pump remarks:

#7 Housing 34 stg Flex 80

Motor remarks:

MTR 562XP 100/2300/27 04R PW PN: 105151672-NSF01

Seal remarks:

SEAL GSB3 DB CUW HL CNSF5 NSF_PNT PW VTPN:105150486-NSF01 PN 105109564

LUBE OIL CNSF5 55GL DRUM

Cable remarks:

CENTRILINK 20 055 4PHT 76381 400°F PW CENTRILINK 20 040 4PHT 76381 400°F PW

PN: C78718-055-NSF01 or PN: C78718-040-NSF01

Cable: 4SOLTC 5KV PP NIT 6GRD GAL F PW

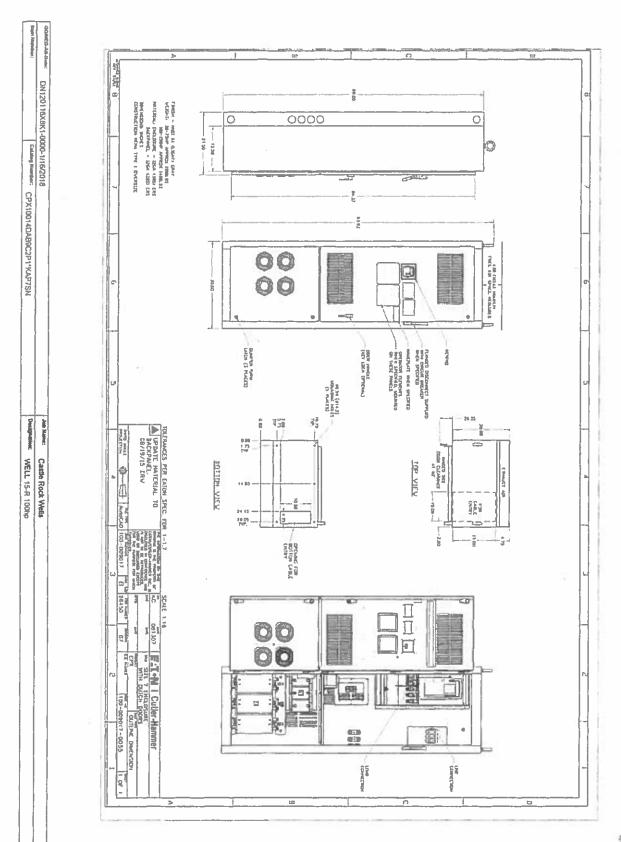
PN: C76933-NSF01

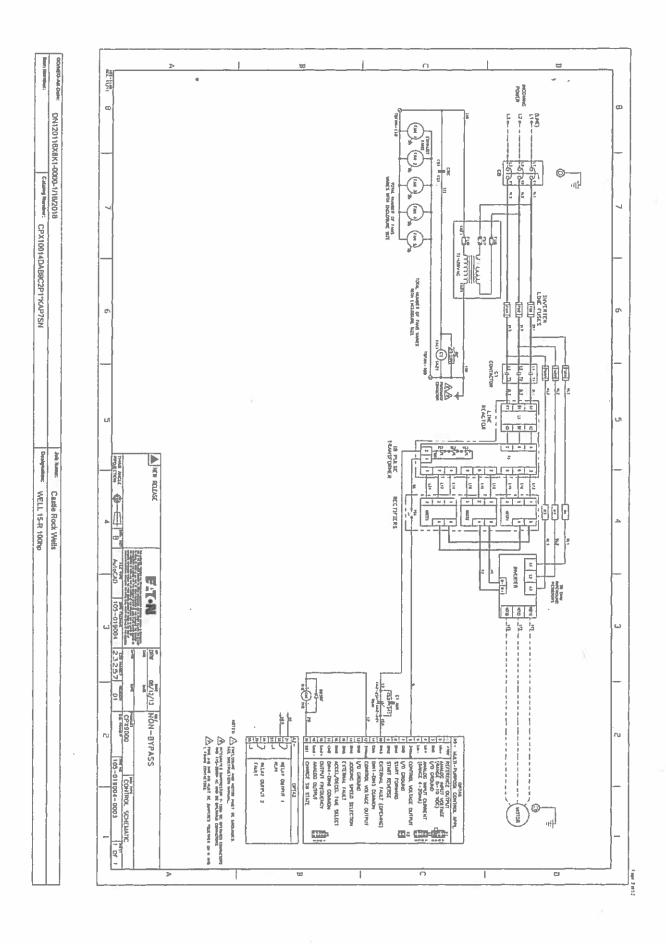
Controller remarks:

No comments

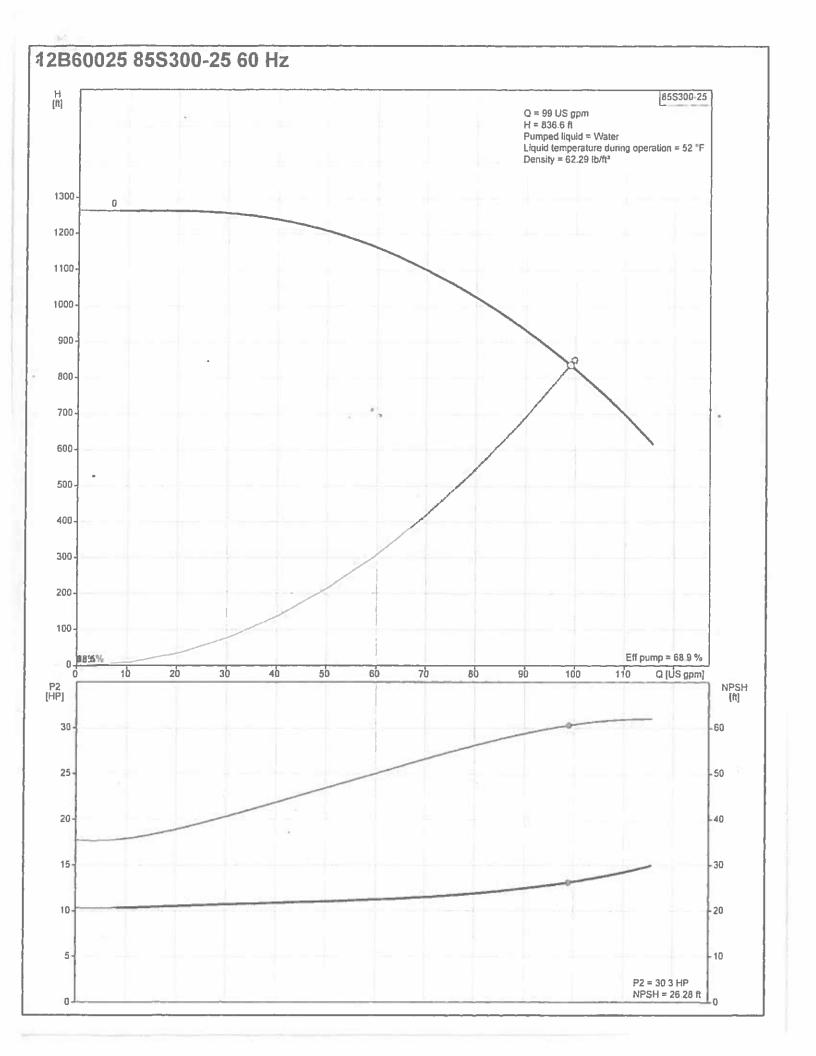
Monitoring and Automation remarks:

AutographPC** V9.5 File Applied_Castle Rock apex ©Copyright 2018 Baker Hughes a GE Company. All Rights Reserved





Position Count | Description 855300-25 Product photo could vary from the actual product Product No.: 12B60025 Multi-stage submersible pump for raw water supply. groundwater lowering and pressure boosting. The pump is suitable for pumping clean, thin, non-agressive liquids without solid particles or fibers. The pump is made entirely of Stainless steel DIN W.-Nr. EN 1.4301 and suitable for horizontal and vertical installation. The pump is fitted with a built-in non-return valve. Liquid: Pumped liquid: Water Maximum liquid temperature: 72 °F Liquid temperature during operation: 52 °F Density: 62.29 lb/ft3 Technical: Speed for pump data: 3450 rpm Actual calculated flow: 99 US gpm Resulting head of the pump: 836.6 ft Curve tolerance: ISO9906:2012 3B Materials: Pump: Stainless steel EN 1.4301 AISI 304 Impelier: Stainless steel EN 1.4301 AISI 304 Installation: Pump outlet: 3"NPT Motor diameter: 6 inch Electrical data: Rated power - P2: 30 HP Power (P2) required by pump: 30 HP Start. method: direct-on-line Others: ErP status: EuP Standalone/Prod. Net weight: 85:1 lb Gross weight: 97 lb Shipping volume: 2.4 ft3



Description	Value	
General information:		
Product name:	85\$300-25	
Product No.:	12B60025	
EAN:	5700391307065	
Technical:		
Speed for pump data:	3450 rpm	
Actual calculated flow:	99 US gpm	
Resulting head of the pump:	836.6 ft	
Stages.	25	
Impeller reduc.	NONE	
Curve tolerance:	ISO9906 2012 3B	
Model:	В	
Valve:	YES	
Materials:		
Pump.	Stainless steel	
	EN 1.4301	
	AISI 304	
mpeller:	Stainless steel	
-	EN 1.4301	
	AISI 304	
nstallation:		
outlet:	3"NPT	
Motor diameter	6 inch	
Invitels		
liquid:	Water	
Sumped liquid:	72 °F	
Maximum liquid temperature:	52 °F	
Iquid temperature during operation:	52 °F 62 29 lb/ft³	
Density:		
Electrical data:	•	
Applic motor:	GRUNDFOS	
Rated power - P2	30 HP	
Power (P2) required by pump:	30 HP	
Start method:	direct-on-line	
nest, memod,	diect.on-mie	
Others:	P. D. Otandalana Porci	
rP status	EuP Standalone/Prod	
Net weight:	85.1 lb	
Gross weight:	97 lb	
10.1 1		
Shipping volume: Sales region:	2.4 ft³ Namreg	

