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**FILE:** 4675\_LR01

November 7, 2022

Kerr Wood Leidal Associates Ltd.  
 200 – 4185A Still Creek Drive  
 Burnaby, BC V5C 6G9

Attention: Kris Sundberg, AScT, Project Manager

Re: City of White Rock WR22-022 Tender Review and Recommendation

Piteau has reviewed the submitted bids for City of White Rock Contract WR22-022: Production Well 5 Well Drilling and Testing. The results are summarized in the table below.

Tenderer	Drillwell Enterprises	Precision Service & Pumps
Air Rotary Operator	Drillwell	A&H
Cable Tool Operator	Drillwell	Precision
Air Rotary Rig	DR-24	DR-24
Cable Tool Rig	28L	60L
Pumping Test Contractor	Precision	Precision
Estimated Cost	\$287,125	\$348,898

Both submissions meet the requirements set out in the tender package. The totals in the table above are slightly different than submitted by the proponents to provide a direct comparison of the bids. A detailed table comparing the Schedule 1 tables submitted by both proponents is included as Table 1. The minor differences from the original submissions are highlighted with clarification notes.

Piteau recommends selecting Drillwell Enterprises (Drillwell) to complete the drilling of new production Well 5, based on:

- A lower price; and
- Proven track record with operating the cable tool rig for similar applications, including Well 8 for the City of White Rock.

Drillwell's proposal includes subcontracting the pumping test work to Precision Service and Pumps (the other proponent). Drillwell provides an option for the City of White Rock to contract the pumping test portion of the work to Precision directly to avoid Drillwell's 10% markup.



We trust the above is adequate for your current needs. If you have any questions regarding the above, or we can be of further service, please do not hesitate to contact us.

Respectfully submitted,

**PITEAU ASSOCIATES ENGINEERING LTD.**

Jennifer Mancer, P.Eng.  
Senior Hydrogeologist

JM/ld  
Att.

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**TABLE**

# COMPARISON OF WR22-022 SUBMITTED SCHEDULE 1 TABLES

**Tenderer**  
**Air Rotary Operator**  
**Cable Tool Operator**  
**Air Rotary Rig**  
**Cable Tool Rig**  
**Pumping Test Contractor**

**Drillwell**  
**Drillwell**  
**Drillwell**  
**DR-24**  
**28L**  
**Precision**

**Precision**  
**A&H**  
**Precision**  
**DR-24**  
**60L**  
**Precision**

ITEM NO.	DESCRIPTION	DRILLING METHOD	UNIT	EST. QUANTITY	UNIT COST	ITEM COST	UNIT COST	ITEM COST	Comment where change was made to bid submission
<b>ADVANCE CASINGS, COMPLETE SURFACE SEAL</b>									
A1	Mobilize and Demobilize Air Rotary drilling equipment	A/R	L.S.	1	\$15,000	\$15,000	\$28,750	\$28,750	
A2	Install Temporary 508mm (20") surface casing to 6m	A/R	L.S.	1	\$11,000	\$11,000	\$5,750	\$5,750	
A3	Install 406mm (16") overlap casing to 6m	A/R	Metre	6	\$475	\$2,850	\$383	\$2,300	Backcalculated Precision's Unit Cost
A4	Drill and case 406mm (16") casing	A/R	Metre	79	\$1,050	\$82,950	\$1,320	\$104,296	Precision's item cost used quantity of 80m. Adjusted for 79m drilling to be consistent with Schedule 1.
A5	Grout and remove 508mm (20") surface casing	A/R	L.S.	1	\$3,000	\$3,000	\$2,875	\$2,875	
A6	Drilling crew living allowance	A/R	Day	7	\$900	\$6,300	\$550	\$3,850	
A7	Standby: full drill crew	A/R	Hour	4	\$300	\$1,200	\$690	\$2,760	
A8	Supply of 406mm (16") casing shoe	A/R	Each	1	\$1,200	\$1,200	\$1,438	\$1,438	
A9	Other items to supplied at cost plus _____%	A/R	%	xx	\$950.0	\$1,045	\$1,200	\$1,440	Drillwell will add 10% Markup, Precision 20%. Drillwell assumes utility locator at 950. Precision does not specify what is included.
B1	Mobilize and Demobilize Cable Tool drilling equipment	C/T	L.S.	1	\$8,000	\$8,000	\$38,910	\$38,910	
B2	Install 305mm (12") overlap casing to approx. 105m	C/T	Metre	85	\$325	\$27,625	\$502	\$42,653	
B3	Drill and case 305mm (12") casing	C/T	Metre	30	\$1,100	\$33,000	\$825	\$24,750	
B4	Drilling crew living allowance	C/T	Day	7	\$625	\$4,375	\$550	\$3,850	
B5	Standby: full drill crew	C/T	Hour	4	\$250	\$1,000	\$375	\$1,500	
B6	Supply of 305mm (12") casing shoe	C/T	Each	1	\$1,375	\$1,375	\$789	\$789	
SUBTOTAL						\$199,920		\$265,911	
<b>INSTALL AND DEVELOP WELL SCREEN</b>									
C1	Hourly work to install well screen, artificial filter pack, and develop well	C/T	Hour	50	\$350	\$17,500	\$375	\$18,750	
C2	Down-hole video inspection following well completion	C/T	L.S.	1	\$1,500	\$1,500	\$990	\$990	
C3	Drilling crew living allowance	C/T	Day	6	\$625	\$3,750	\$550	\$3,300	
C4	Standby: full drill crew	C/T	Hour	0	\$275		\$375		
C5	Supply 203mm (8") pipe size stainless steel well screen	C/T	Metre	10	\$1,850	\$18,500	\$1,447	\$14,472	
C6	Supply 203mm (8") pipe size stainless steel riser	C/T	Metre	0.6	\$1,850	\$1,110	\$1,314	\$788	
C7	Supply 203mm (8") bail bottom	C/T	Each	1	\$250	\$250	\$567	\$567	
C8	Supply 203mm (8") pipe size K-Packer	C/T	Each	1	\$925	\$925	\$1,053	\$1,053	
C9	Supply 305mm x 203mm (12" x 8") overshot packer	C/T	Each	1	\$2,500	\$2,500	\$3,888	\$3,888	
C10	Supply 305mm (12") telescope size stainless steel well screen	C/T	Metre	0	\$2,600		\$1,872		
C11	Supply 305mm (12") tel stainless steel riser	C/T	Metre	0	\$2,600		\$2,376		
C12	Supply 305mm (12") bail bottom	C/T	Each	0	\$325		\$810		
C13	Supply 305mm (12") tel K-Packer	C/T	Each	0	\$1,325		\$1,557		
C14	Supply 406mm OD X 300mm ID annular plate	C/T	Each	1	\$225	\$225	\$2,700	\$2,700	
C15	Other items to supplied at cost plus _____%	C/T	%	xx	\$750	\$825	\$750	\$900	Drillwell will add 10% Markup, Precision 20%. Drillwell assumes filter pack at 750. Added a 750 charge to Precision's quote for consistency.
SUBTOTAL						\$47,085		\$46,508	
<b>CONDUCT AQUIFER PUMPING TESTS</b>									
D1	Mobilize and Demobilize pumping test equipment	-	L.S.	1	\$3,700	\$3,700	\$3,600	\$3,600	
D2	Install and withdraw test pump and discharge pipe for pumping test	-	Hour	30	\$375	\$11,250	\$340	\$10,200	Both quotes indicate item D2 will take 30h, not 10h in the Tender Package. Quantity adjusted to 30h for both quotes.
D3	Operate pump for water sample collection	-	Hour	2	\$450	\$900	\$408	\$815	
D4	Perform step test	-	Hour	5	\$420	\$2,100	\$382	\$1,908	
D5	Perform constant rate test to 24 hours	-	Hour	24	\$300	\$7,200	\$272	\$6,525	
D6	Monitor pumping test recovery	-	Hour	4	\$270	\$1,080	\$245	\$980	
D7	Pump testing crew living allowance	-	Day	3	\$390	\$1,170	\$353	\$1,059	
D8	Standby: full pump testing crew	-	Hour	0	\$375		\$430		
D9	Standby: equipment only; crew not on site	-	Day	1	\$2,050	\$2,050	\$1,725	\$1,725	Changed to daily rate from L.S. as per Addendum 1
D10	Supply discharge pipe for pumping test	-	m	200	\$6.6	\$1,320	\$6	\$1,200	
D11	Supply power for pumping test	-	L.S.	1	\$6,500	\$6,500	\$5,897	\$5,897	
D12	Perform downhole camera inspection	-	L.S.	1	\$2,850	\$2,850	\$2,570	\$2,570	
SUBTOTAL						\$40,120		\$36,479	
TOTAL TENDER AMOUNT						\$287,125		\$348,898	

Price on tender submission

\$279,625

\$350,218

Difference between best estimate of actual price and tender price

\$7,500

(\$1,320)

Note: "A/R" - Dual Mode Air Rotary method; "C/T" - Cable Tool method