

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-15043

Exam Date: 5/23/2012

1. Current Owner: CITY OF SALMON
200 MAIN ST
SALMON ID 83467
(208)756-3214
2. Accompanied by: Charlie Cockrel
Phone No: (208) 940-0510
Address: Same As Above
Relationship to Permit Holder: Park Maintenance Specialist
3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 74-644
2. Other water rights with the same point of diversion: NONE

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER	NE1/4SW1/4	Sec. 9,	Twp 21N,	Rge 22E, B.M.
LEMHI County				
GROUND WATER	NE1/4SW1/4	Sec. 9,	Twp 21N,	Rge 22E, B.M.
LEMHI County				
GROUND WATER	SW1/4NW1/4	Sec. 9,	Twp 21N,	Rge 22E, B.M.
LEMHI County				

Method of Determination: GPS and Visual Inspection

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
21N	22E	9							13.0		16.0	37.0	2.5						68.5

Total Acres: 68.5

Method of Determination: Visual Inspection and GIS

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- YES Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- YES Aerial Photo Attached (required for irrigation of 10+ acres).
- YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Far Well Site Tag # D0020957	Unknown	5	Unknown Submersible	Submersible	Unknown Submersible
Near Well Site Tag # D0020968	Unknown	5	Unknown Submersible	Submersible	Unknown Submersible
Clubhouse Well Site Tag # D0020960	Unknown	5	Unknown Submersible	Submersible	Unknown Submersible

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Thyme Flyte	Polysonic					3/28/2012

2. Measurements: The flow was measured using a Thyme Flyte flow meter. The owner's representative stated the measurements seemed correct to him at the time. There was no way to double check the measurements. I am reasonable comfortable with these measurements.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method:

Three flow measurements were made at each well. Please see sheet for actual measurement from flowmeter. Below is the combined calculation of the three measurements.

Far Well = 0.54 cfs
 Near Well = 0.59 cfs
Clubhouse Well = 0.33 cfs
Total = 1.46 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 68.5 \text{ ac} \times 3.5 \text{ af/ac} = 239.8 \text{ annual af.}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.37 \text{ cfs} \times 256 \text{ days} \times 1.9835 = 695.7 \text{ annual af.}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 239.8 \text{ annual af}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

The water for permit 74-15043 is diverted from 3 wells into a large pond. The pond is approximately 0.5 acre feet in surface area and 13 feet deep (6.5 af pond volume). All of the wells have 5 Hp pumps, but it appears as though the two east wells (the Far Well and the Near Well) have a better supply of water than the west well (the Clubhouse Well). The owner's representative stated that they have never gotten as much water out of the Clubhouse well, and generally used it for a backup and during the times of peak water use. A 75 Hp re-lift pump diverts the water from the pond into a mainline that runs around the outside perimeter of the golf course with a second mainline running through the center of the golf course. There are 3 spurs traveling north off of the golf course's northern mainline that supply water to the baseball fields and parks north of the golf course.

The watermaster confirmed by telephone that water right 74-644 has been maintained in the Water District 74 Water Supply Bank. Originally this permit was filed to irrigate 120 acres using 74-644, 74-15010, and 74-14995 as mitigation. However, the City of Salmon was only able to purchase approximately 80 acres of the 120 acres described in this water right permit. Out of the actual 80 acres purchased they were able to develop 68.5 acres. The lands associated with water rights 74-15010, and 74-14995 were not purchased, so the City of Salmon has no control over these water rights. Water right 74-644 allows the irrigation of 82 acres, so it is adequate to supply the mitigation for the 68.5 acres developed. There is also an additional 13.5 acres under water right 74-644 available for the City of Salmon to use for future mitigation if needed.

The pond used for irrigation in this permit does not meet the 24 hour rule. The pond is approximately 0.5 acres in surface area and 13 feet deep. With these dimensions, there is 6.5 af of storage volume. With the original diversion rate for this permit of 3.56 cfs, the City of Salmon would have been in compliance with the 24 hour fill rule, however, with the reduced irrigation use and diversion rate, the pond exceeds the 24 hour rule exemption. I have informed the City of Salmon staff they will be required to file another water right permit to provide a valid water right for the pond storage. Water right 74-644 still has adequate water available to use as mitigation for the pond storage, so there shouldn't be an issue with filing a new water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	1.370 CFS	239.80 AF
<u>Totals:</u>		1.370 CFS	239.80 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

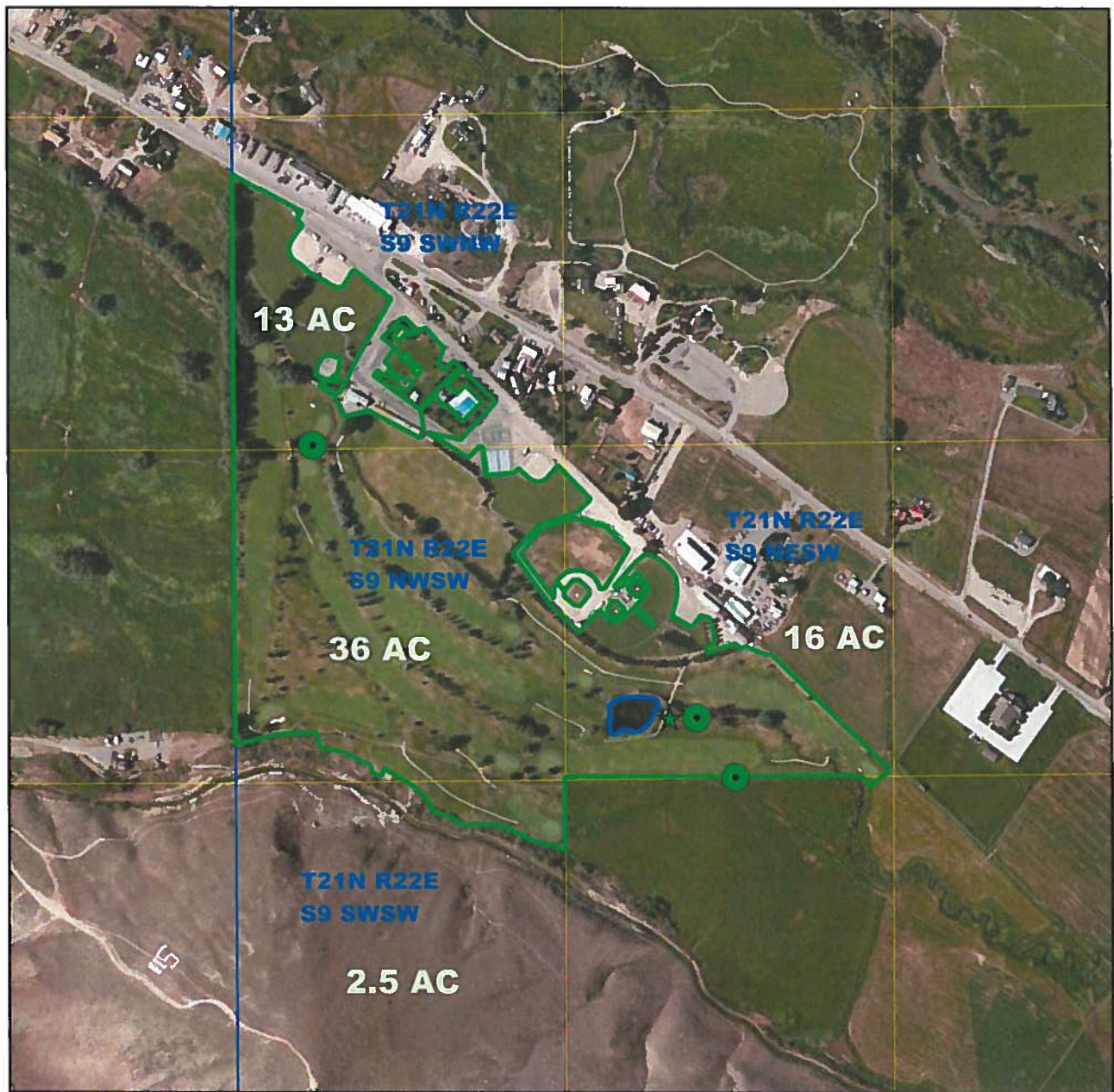
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION Daniel A. Nelson (Staff Hydrologist)

Field Examiner's Name  Date 6-14-2012

Reviewer _____ Date _____

Field Exam Map for 74-15043
Place of Use and Point of Diversion



0.45 0.225 0 Miles



POINT OF DIVERSION



POINT OF DIVERSION



PLACE OF USE



SECTION



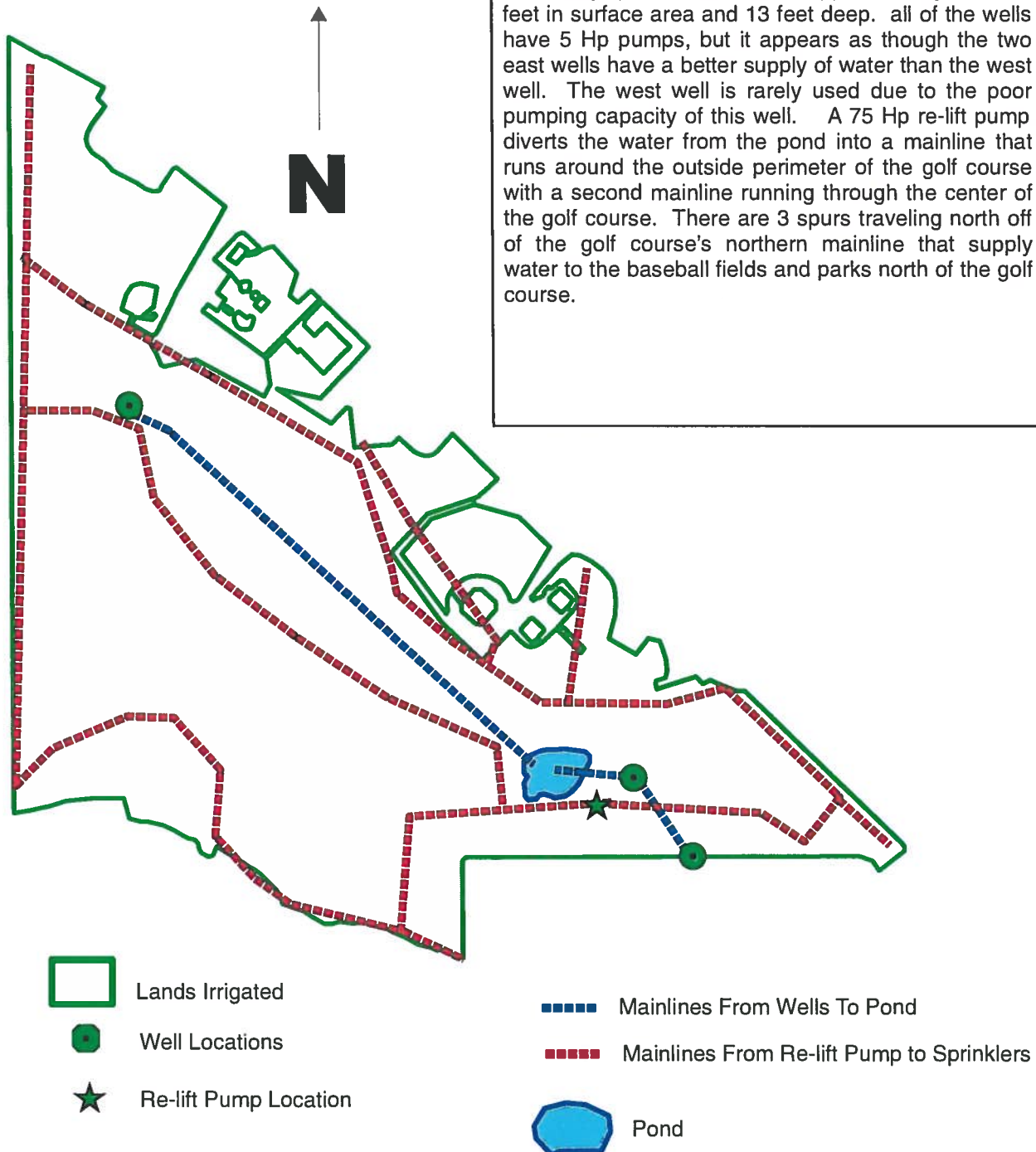
QUARTER QUARTER



2011 NAIP
by Dan Nelson
6/13/2012

Field Exam Map for 74-15043 System Diagram

The water for permit 74-15043 is diverted from 3 wells into a large pond. The pond is approximately 0.5 acre feet in surface area and 13 feet deep. all of the wells have 5 Hp pumps, but it appears as though the two east wells have a better supply of water than the west well. The west well is rarely used due to the poor pumping capacity of this well. A 75 Hp re-lift pump diverts the water from the pond into a mainline that runs around the outside perimeter of the golf course with a second mainline running through the center of the golf course. There are 3 spurs traveling north off of the golf course's northern mainline that supply water to the baseball fields and parks north of the golf course.



POLYSONIC READINGS

PERMIT #: 74-15043

POINT OF DIVERSION

Clubhouse Well (Site Tag # D0020960)

FIRST SET OF INFORMATION:

SET-UP IMPUTE DATA USED DURING
PREPARATION FOR FLOW MEASUREMENTS.

SECOND SET OF INFORMATION:

THESE ARE THE READINGS TAKEN FOR
THIS PUMP. THE TOTAL FLOW WAS
AVERAGED OVER A 10 MINUTE READING.

FLows IN GALLONS PER MINUTE (GPM)

146 GPM FLOW RATE

FLows IN CUBIC FEET PER SECOND (CFS)

146 GPM / 448.8 = 0.33 CFS FLOW RATE

MODE SELECT	10:03+ 1.487E 2GPM 00R
INPUT	+ 3.536E 0FPS 00R
	+00000 *10 G 00R
	-00000 *10 G 00R
OUTER DIAMETER	10:04+ 1.418E 2GPM 00R
4.5201 IN	+ 3.372E 0FPS 00R
	+00014 *10 G 00R
	-00000 *10 G 00R
PIPE MATERIAL	10:05+ 1.436E 2GPM 00R
? PUC	+ 3.415E 0FPS 00R
	+00029 *10 G 00R
	-00000 *10 G 00R
WALL THICKNESS	10:06+ 1.493E 2GPM 00R
0.1870 IN	+ 3.549E 0FPS 00R
	+00043 *10 G 00R
	-00000 *10 G 00R
INNER LINING	10:07+ 1.418E 2GPM 00R
? NO LING.	+ 3.372E 0FPS 00R
	+00058 *10 G 00R
	-00000 *10 G 00R
SENSOR MOUNTING	10:08+ 1.406E 2GPM 00R
? U	+ 3.343E 0FPS 00R
	+00073 *10 G 00R
	-00000 *10 G 00R
TYPE OF SENSOR	10:09+ 1.520E 2GPM 00R
? SMALL	+ 3.615E 0FPS 00R
	+00087 *10 G 00R
	-00000 *10 G 00R
SPACING	10:10+ 1.397E 2GPM 00R
2.680 IN U	+ 3.323E 0FPS 00R
	+00102 *10 G 00R
	-00000 *10 G 00R
ZERO MODE	10:11+ 1.464E 2GPM 00R
CLEAR	+ 3.480E 0FPS 00R
	+00116 *10 G 00R
	-00000 *10 G 00R
ZERO MODE	10:12+ 1.520E 2GPM 00R
AUT ZERO	+ 3.615E 0FPS 00R
	+00131 *10 G 00R
	-00000 *10 G 00R
ZERO MODE	10:13+ 1.461E 2GPM 00R
ZERO OPR	+ 3.474E 0FPS 00R
	+00146 *10 G 00R
	-00000 *10 G 00R
05-23 09:5800 *R	
+003.10 % A12	
MODE SELECT	
T0 CHECK	
0159.1 NMSEC	
102.72 % T0	

POLYSONIC READINGS

PERMIT #: 74-15043

POINT OF DIVERSION

Near Well (Site Tag # D0020968)

FIRST SET OF INFORMATION:

SET-UP IMPUTE DATA USED DURING
PREPARATION FOR FLOW MEASUREMENTS.

SECOND SET OF INFORMATION:

THESE ARE THE READINGS TAKEN FOR
THIS PUMP. THE TOTAL FLOW WAS
AVERAGED OVER A 10 MINUTE READING.

FLows IN GALLONS PER MINUTE (GPM)

255 GPM FLOW RATE

FLows IN CUBIC FEET PER SECOND (CFS)

255 GPM / 448.8 = 0.59 CFS FLOW RATE

MODE SELECT	09:25+ 2.539E 2GPM	00R
INPUT	+ 6.082E 0FPS	00R
	+00000 *10 G	00R
	-00000 *10 G	00R
OUTER DIAMETER	09:26+ 2.594E 2GPM	00R
4.5201 IN	+ 6.213E 0FPS	00R
	+00025 *10 G	00R
PIPE MATERIAL	-00000 *10 G	00R
? PVC		
WALL THICKNESS	09:27+ 2.568E 2GPM	00R
0.1950 IN	+ 6.151E 0FPS	00R
	+00050 *10 G	00R
	-00000 *10 G	00R
INNER LINING	09:28+ 2.487E 2GPM	00R
? NO LING.	+ 5.958E 0FPS	00R
	+00076 *10 G	00R
	-00000 *10 G	00R
KIND OF FLUID	09:29+ 2.525E 2GPM	00R
? WATER	+ 6.049E 0FPS	00R
	+00101 *10 G	00R
	-00000 *10 G	00R
SENSOR MOUNTING	09:30+ 2.539E 2GPM	00R
? U	+ 6.082E 0FPS	00R
	+00127 *10 G	00R
	-00000 *10 G	00R
TYPE OF SENSOR	09:31+ 2.498E 2GPM	00R
? SMALL	+ 5.984E 0FPS	00R
	+00152 *10 G	00R
	-00000 *10 G	00R
SPACING	09:32+ 2.525E 2GPM	00R
2.683 IN U	+ 6.049E 0FPS	00R
	+00178 *10 G	00R
	-00000 *10 G	00R
ZERO MODE	09:33+ 2.557E 2GPM	00R
CLEAR	+ 6.125E 0FPS	00R
	+00204 *10 G	00R
	-00000 *10 G	00R
ZERO MODE	09:34+ 2.513E 2GPM	00R
AUT ZERO	+ 6.020E 0FPS	00R
	+00229 *10 G	00R
	-00000 *10 G	00R
ZERO MODE	09:35+ 2.555E 2GPM	00R
ZERO OPR	+ 6.122E 0FPS	00R
	+00255 *10 G	00R
	-00000 *10 G	00R
05-23 09:2200 *R		
+003.10 % AI2		
MODE SELECT		
T0 CHECK		
0159.1 MMSEC		
103.13 % T0		

POLYSONIC READINGS

PERMIT #: 74-15043

POINT OF DIVERSION

Far Well (Site Tag # D0020957)

FIRST SET OF INFORMATION:

SET-UP IMPUTE DATA USED DURING
PREPARATION FOR FLOW MEASUREMENTS.

SECOND SET OF INFORMATION:

THESE ARE THE READINGS TAKEN FOR
THIS PUMP. THE TOTAL FLOW WAS
AVERAGED OVER A 10 MINUTE READING.

FLOWS IN GALLONS PER MINUTE (GPM)

241 GPM FLOW RATE

FLOWS IN CUBIC FEET PER SECOND (CFS)

241 GPM / 448.8 = 0.54 CFS FLOW RATE

MODE SELECT
INPUT

OUTER DIAMETER
4.52000 IN

PIPE MATERIAL
PVC

WALL THICKNESS
0.1880 IN

INNER LINING
NO LING.

KIND OF FLUID
WATER

SENSOR MOUNTING
U

TYPE OF SENSOR
SMALL

SPACING
2.681 IN U

SPACING
2.681 IN U

ZERO MODE
CLEAR

ZERO MODE
AUT ZERO

ZERO MODE
ZERO OPR

05-23 08:5200 *R
+003.10 % AI2

MODE SELECT
TO CHECK

0459.0 MMSEC
102.72 % TO

05-23 08:5400 *R
+ 2.416E 2GPM

08:58+ 2.383E 2GPM 00R
+ 5.672E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

08:59+ 2.389E 2GPM 00R
+ 5.685E 0FPS 00R
+00024 *10 G 00R
-00000 *10 G 00R

09:00+ 2.481E 2GPM 00R
+ 5.905E 0FPS 00R
+00048 *10 G 00R
-00000 *10 G 00R

09:01+ 2.386E 2GPM 00R
+ 5.679E 0FPS 00R
+00072 *10 G 00R
-00000 *10 G 00R

09:02+ 2.476E 2GPM 00R
+ 5.892E 0FPS 00R
+00096 *10 G 00R
-00000 *10 G 00R

09:03+ 2.416E 2GPM 00R
+ 5.751E 0FPS 00R
+00120 *10 G 00R
-00000 *10 G 00R

09:04+ 2.434E 2GPM 00R
+ 5.793E 0FPS 00R
+00144 *10 G 00R
-00000 *10 G 00R

09:05+ 2.405E 2GPM 00R
+ 5.725E 0FPS 00R
+00169 *10 G 00R
-00000 *10 G 00R

09:06+ 2.350E 2GPM 00R
+ 5.593E 0FPS 00R
+00193 *10 G 00R
-00000 *10 G 00R

09:07+ 2.473E 2GPM 00R
+ 5.835E 0FPS 00R
+00217 *10 G 00R
-00000 *10 G 00R

241 GPM
912170

Foster Well Drilling & Construction, LLC

P.O. Box 46

Phone/Fax 208-768-2050

Leadore, Idaho 83464

Cell Phone 208-303-7462

STATEMENT

SUBMITTED TO: City of Salmon/Golf Course Project

DATE: January 25, 2007

ADDRESS: P.O. Box 2424

PHONE: 208-756-6322

Salmon, Idaho 83467

Statement Due Date: January 25, 2007

Date	Description	CREDIT	CHARGE	TOTAL
1/25/07	2 -3 phase 200 GPM Pump, Motor, Controller (Plus \$85.00 each for 3 -New Controller's)	0	\$ 9,442.74	\$ 9,442.74
1/25/07	60 feet 4" Heavy Galv. Drop Pipe @ \$ 12.91 per foot	0	\$ 774.60	\$ 774.60
	100 ft #10/3/w/grnd double jacked submersible pump wire @ \$ 2.28 per ft	0	\$ 228.00	\$ 228.00
	2" Couplers heavy duty 4 @ \$ 48.15 each	0	\$ 192.60	\$ 96.30
	2- 4" heavy duty ball valve @ \$ 495.10	0	\$ 990.20	\$ 990.20
	(2) Installation's includes misc. materials not listed 2 @ \$ 575.00	0	\$ 1,150.00	\$ 1,150.00
	(no additonal charge to pull & set pump again or for shipping to return 1-3 phase motor			
	& recieve the other 3 phase motor) Foster paid shipping on both items.			
	2 - 4" 90 heavy duty, 2-4" X 10" Nipple, 3- stakon shrink kit	0	\$ 775.70	\$ 775.70
	10" well casing (35 ft) @ \$33.05 per foot	0	\$ 1,156.75	\$ 1,156.75
	10" Drilling Well Number 2 \$ 65.00 per ft (52 ft drilled depth)	0	\$ 3,380.00	\$ 3,380.00
	Air Well Development Well Number 1 (12 hours) @ \$250.00 per hour	0	\$ 3,000.00	\$ 3,000.00
	Air Well Development Well Number2 (9.5 hours) @ \$250.00 per hour	0	\$ 2,375.00	\$ 2,375.00
	Pump Testing Well Number 1 (24 hours) @ \$150.00 per hour	0	\$ 3,600.00	\$ 3,600.00
	Pump Testing Well Number 2 (24 hours) @ \$150.00 per hour	0	\$ 3,600.00	\$ 3,600.00

TOTAL BALANCE DUE : \$ 30,569.29

Total balance due on date stated above. \$15.00 rebilling charge and 2% interest will be assessed to all past due accounts. \$15.00 rebilling charge and 2% interest will be charged per month thereafter.

THANK YOU. WE APPRECIATE YOU BUSINESS !!!