

**STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES**

APPLICATION FOR PERMIT

To appropriate the public water of the State of Idaho

RECEIVED
APR 05 2011
IDWR / NORTH

1. Name: MARK CORRAO And/Or
TIFFANY CORRAO
1231 HATTER CREEK RD
PRINCETON ID 83857
(208) 875-8741
2. Source: LONG CREEK Tributary to: HATTER CREEK
3. Location of Point of Diversion:
#1 LONG CREEK SE1/4SW1/4 Sec. 34, Twp 41N, Rge 04W, B.M.
LATAH County

4. Water will be used for the following purposes:

<u>Purpose</u>	<u>From</u>	<u>To</u>	<u>RATE OF DIVERSION</u>	<u>ANNUAL VOLUME</u>
DIVERSION TO STORAGE	01/01	to 12/31	0.20 CFS	
IRRIGATION	04/01	to 10/31	0.20 CFS	
IRRIGATION STORAGE	01/01	to 12/31		59.3 AF
IRRIGATION FROM STORAGE	04/01	to 10/31		39.6 AF
STOCKWATER	01/01	to 12/31	0.02 CFS	
STOCKWATER STORAGE	01/01	to 12/31		20.0 AF
STOCKWATER FROM STORAGE	01/01	to 12/31		0.3 AF

5. Total quantity to be appropriated is: 0.20 CFS 59.6 AF

6. Proposed diverting works:

POINT OF DIVERSION #1

a. Type and size of devices used to divert water from the source: PIPE DIVERSION TO STORAGE POND

- b. Height of storage dam 3 feet;
Active reservoir capacity 13.6 acre-feet;
Total reservoir capacity 13.6 acre-feet;.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 year(s).

8.

PLACE OF USE: IRRIGATION, IRRIGATION STORAGE, IRRIGATION FROM STORAGE
STOCKWATER, STOCKWATER STORAGE, STOCKWATER FROM STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
41N 04W 34	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	13.2

Total Acres: 13.2

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9a. Who owns the property at the point of diversion? If other than applicant, describe the arrangement enabling the applicant to make this filing.

APPLICANT

9b. Who owns the land to be irrigated or place of use? If other than applicant, describe the arrangement enabling the applicant to make this filing.

APPLICANT

10. Remarks:

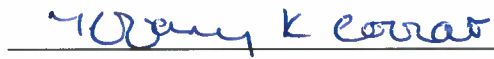
WE ARE SEEKING A WATER USE PERMIT TO DIVERT WATER FROM LONG CREEK ON OUR PROPERTY AT 0.2 CFS INTO A PIT TYPE POND APPROXIMATELY 13.6 AF IN SIZE USING A PUMP FOR THE DIVERSION WORKS. WATER FROM THE POND WILL BE USED FOR STOCK WATER ALL YEAR AND IRRIGATION OF OUR PASTURE THROUGH A CENTRIFUGAL PUMP AND BIG GUN SPINKLER DURING THE IRRIGATION PERIOD. I HAVE ATTACHED INFORMATION AND WEB ADDRESSES TO HELP DESCRIBE THE HEADGATE CULVERT AND PUMP TO BE USED. I HAVE ALSO INCLUDED A SKETCH OF THE DIVERSION WORKS AND A SITE MAP AS REQUESTED FOR QUESTION 13.

11. Map of proposed point of diversion and place of use attached? [X]

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.



MARK CORRAO



TIFFANY CORRAO

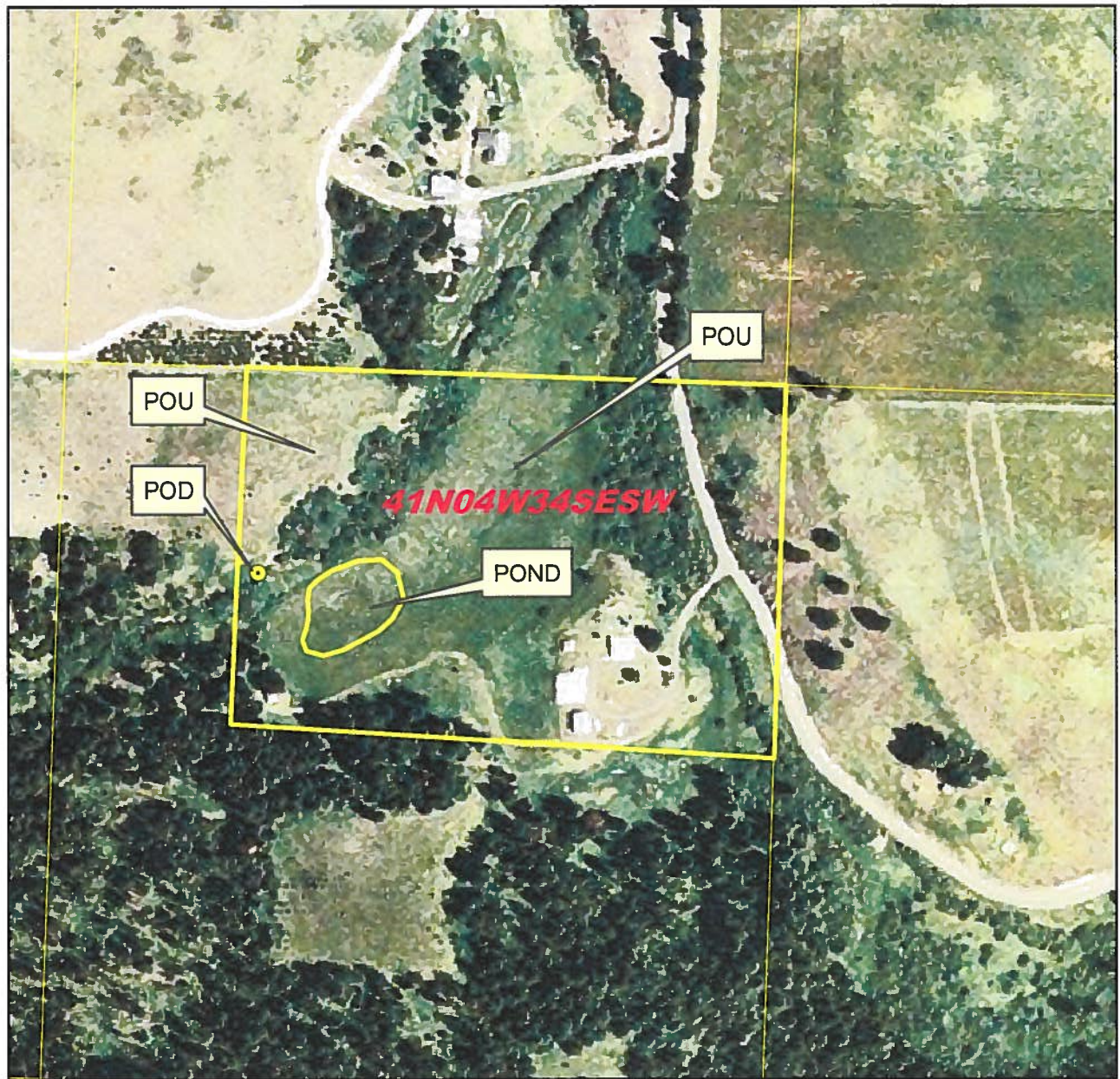
Received by _____ Date 4/5/11 Time _____ Preliminary check by _____
Publication prepared by _____ Date _____ Published in _____
Publication approved _____ Date _____

Receipt No. N026626

Date: 2/22/2011

Received by: _____

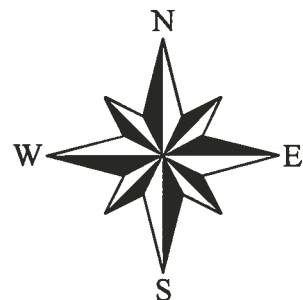
87-10071



0 125 250 500 750 1,000 Feet

Legend

-  workingpod
-  workingpou
-  QQ



APPLICATION #77088

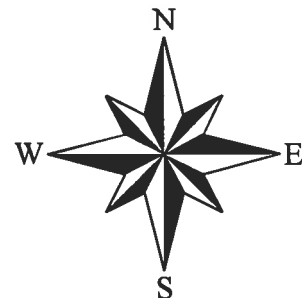
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0 135 270 540 810 1,080 Feet

Legend

- workingpod
- workingpou
- QQ
- Taxlots



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AIR/NORTH



20'05 sec

545

20' @ 4.5 sec 20/4.875

Average Velocity = 4.102 ft/sec

$$\text{Cross Section} = \frac{4782 \text{ in}^2}{144 \frac{\text{in}^2}{\text{ft}^2}} = 33.21 \text{ ft}^2 \times 4.102 \frac{\text{ft}}{\text{sec}}$$

TOTAL VOLUME = 136.22 CFS
High Flow

7
I HAVE THE ORIGINALS OF THESE IF NEEDED
? WILL MEASURE CREEP FLOW EACH MONTH FOR ONE YEAR. THE RECORDS.

TOTAL ESTIMATED AVERAGE CARRIER VELOCITY = $\frac{4.102 \text{ A/sec}}{2} = 2.051 \text{ A/sec}$

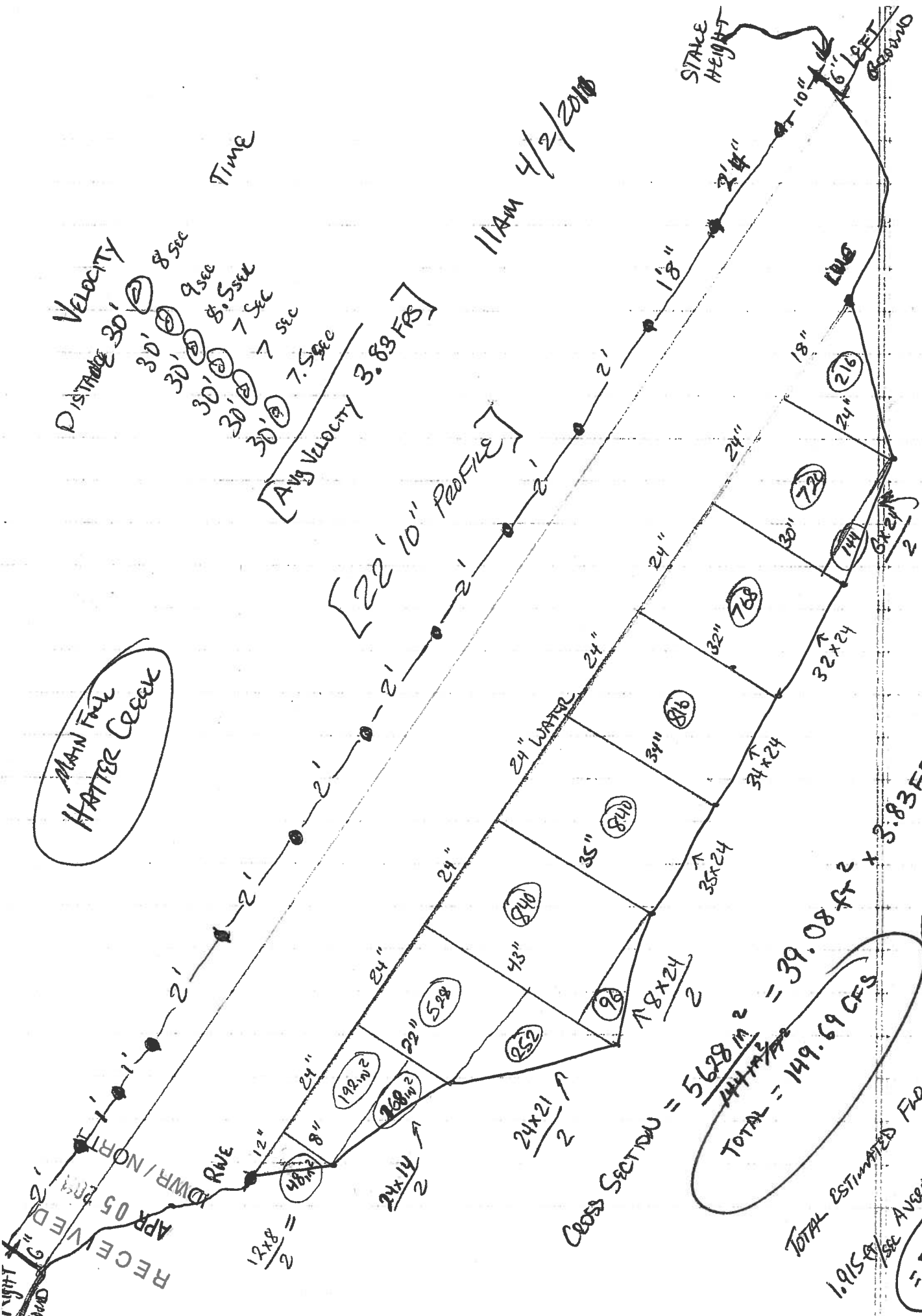
2.051 ft/sec is total channel avg velocity

$$2.051 \times 10^{14} \times 33.214^2$$

CS. 11 EFs

THIS IS THE REAL VOLUME AFTER VELOCITY CORRECTION.

MAIN FINE
HATTER CREEK



Distance	Velocity	Time
30'	8 sec	
30'	9 sec	
30'	8.5 sec	
30'	7 sec	
30'	7 sec	
30'	7.5 sec	
[Avg Velocity 3.83 FPS]		

[22' 10" PROFILE]

CROSS SECTION = $5628 \text{ m}^2 = 39.08 \text{ ft}^2 + 3.83 \text{ FPS}$

TOTAL = 149.69 CFS

TOTAL ESTIMATED FLOW = 1.915 sec

AVERAGE CANAL FLOW = 74.8 CFS

CORRAO POND ANALYSIS

POND SIZE: 255 FT X 155 FT X15 FT = 592,875 SQFT / 43,560 SQFT/AF = 13.6 AF

SURFACE AREA: 255 FT X 155 FT = 39,525 SQFT

EVAPORATION : 2465 GPD X 365 DAYS / 325,850 GALLONS/AF = 2.8 AF

SEEPAGE : 2956 GPD X 365 DAYS / 325,850 GALLONS/AF = 3.3 AF

STOCKWATER : 20 HEAD OF MIXED X 12GPD X 365 DAYS / 325,850 = 0.3 AF

0.2 CFS DIVERSION TO STORAGE

0.2 CFS IRRIGATION

59.3 AF	IRRIGATION STORAGE	a.) POND SIZE	13.6 AF
		b.) EVAPORATION	2.8 AF
		c.) SEEPAGE	3.3 AF
		d.) IRRIGATION (13.2 AC X 3 AF/AC)	39.6 AF
	TOTAL		59.3 AF

39.6 AF IRRIGATION FROM STORAGE (13.2 AC X 3 AF/AC)

0.02 CFS STOCKWATER

STOCKWATER STORAGE	a.) POND SIZE	13.6 AF
	b.) EVAPORATION	2.8 AF
	c.) SEEPAGE	3.3 AF
	d.) STOCKWATER	0.3 AF
TOTAL		20.0 AF

0.3 AF STOCKWATER FROM STORAGE

0.2 CFS TOTAL DIVERSION

59.6 AF TOTAL STORAGE