

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12377

Exam Date: 7/23/2012

1. Current Owner: CARY SINGLETON
1054 ASHWOOD CT
KUNA ID 83634
(208)863-3580
2. Accompanied by: Cary Singleton
Phone No:
Address:
Relationship to Permit Holder: same

- | 3. <u>SOURCE</u> | <u>TRIBUTARY</u> |
|------------------|------------------|
| MUDDY CREEK | GRIMES CREEK |

B. OVERLAP REVIEW

1. Other water rights with the same place of use: none
2. Other water rights with the same point of diversion: none

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

MUDDY CREEK L12NW1/4NW1/4 Sec. 10, Twp 07N, Rge 05E, B.M.
BOISE County

Method of Determination: Garmin GPS 43.96532, -115.85734

2. PLACE OF USE: MINING

[illegible]

Method of Determination:

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

4.

<u>Well or Diversion</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
<u>POD</u>	unknown	6.5	unknown	unknown	

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
<u>Equipment</u>						

2. Measurements: none taken

E. FLOW CALCULATIONS _____ Additional Computation Sheets Attached

Measured Method:

1 – pump rated for 150 gpm. 150 gpm/ 448.8 gpm per cfs = 0.33 cfs

2 – flow through 1.5 inch diameter pipe = approx 0.08 cfs in low pressure system based on IDWR reference

3 – theoretical flow: 6.5 hp, 70% efficiency, 10 psi for open discharge, z = 40 – elevation difference between POD and processing plant.

$$\frac{8.8 \times 6.5 \times 0.7}{40 + [10 \times 2.31]} = \frac{40.04}{63.01} = 0.635 = 0.64 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: not applicable

$$V = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{I.R.}$$

$$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{D.R.}$$

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

2. Volume Calculations for Other Uses: mining

$$18 \text{ gpm} * 60 \text{ minutes/hr} * 5 \text{ hours/day} * 50 \text{ days/ year} = 270000 = 0.83 \text{ afa} = 1 \text{ afa}$$

325, 850 gallons in af

325,850

G. NARRATIVE/REMARKS/COMMENTS

This permit was issued for mining uses in the upper Boise River basin. The correct fee was timely paid. Cary Singleton filed an assignment of permit signed by the former permittee. Mr. Singleton accompanied me on the field exam. Mr. Singleton has been in contact with the USFS and is in the process of renewing the plan of operation and putting the claims in his name. The claims are referred to as the New Start 177717 and the JA-Bob 178123 mining claims.

The source is Muddy Creek. The point of diversion is a natural pond in a marshy area between the main creek bed and Buckskin Road. A 6.5 hp motor and pump divert from the pond through a 2 inch plastic pipe. The pipe transports water about 500 feet to the processing plan through a 1.5 inch diameter plastic pipe. The processing plant is either a trommel or dump truck bed into which the gold mine tailings from old mining activity are dumped and washed. The water then flows into a settling pond and then to a recycle pond. The ponds are remnants of decades old mining activity. When the recycle pond fills, the tailings are washed again in the processing plant. There was no water in either of the ponds on the day of the field exam.

No water is returned to the source. The processing plant is at about 40 foot higher in elevation and it is expected that some of the water drains back to the marshy area.

No measurements were taken the day of the exam. There were no faceplates on the motor or pump and Mr. Singleton did not have the specs. The permittee said the pump was rated for 150 gpm, which equates to 0.33 cfs. A 1.5 inch pipe is capable of transporting about 0.08 cfs. I calculated a theoretical flow, using 10 psi for open discharge, and a Z value of 40 feet which is the approximately change in elevation between the POD in the pond and the processing plant. The result was 0.64 cfs. So, it appears that at least about twice the permitted rate (but likely more) is being diverted.

I sent a letter to the permittee, and copied the Watermaster, regarding the importance of not exceeding the authorized diversion rate in this sensitive upper Basin 63 area.

Mr. Singleton said that he pumps water for mining about 4-5 hours a day for a maximum of about 40 days/ year. Because he was estimating, I calculated the annual volume based on the permitted flow of 0.04 cfs or 18 gpm, 5 hours a day and 50 days a year for an annual volume of 0.83 afa.

I recommend that 0.04 cfs be licensed and that the licensed volume be rounded up 1 afa for Workflow data entry purposes.

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

H. RECOMMENDATIONS

- | | |
|-------------------------|-----------------|
| 1) Permit amount | <u>0.04</u> cfs |
| 2) Beneficial use limit | <u>N/A</u> cfs |
| 3) System measurement | <u>0.08</u> cfs |
| 4) Proof fee amount | <u>0.20</u> cfs |

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
MINING	04/15 to 10/31	0.040 CFS	1.00 AF
	<u>Totals:</u>	0.040 CFS	1.00 AF

2. Recommended Amendments

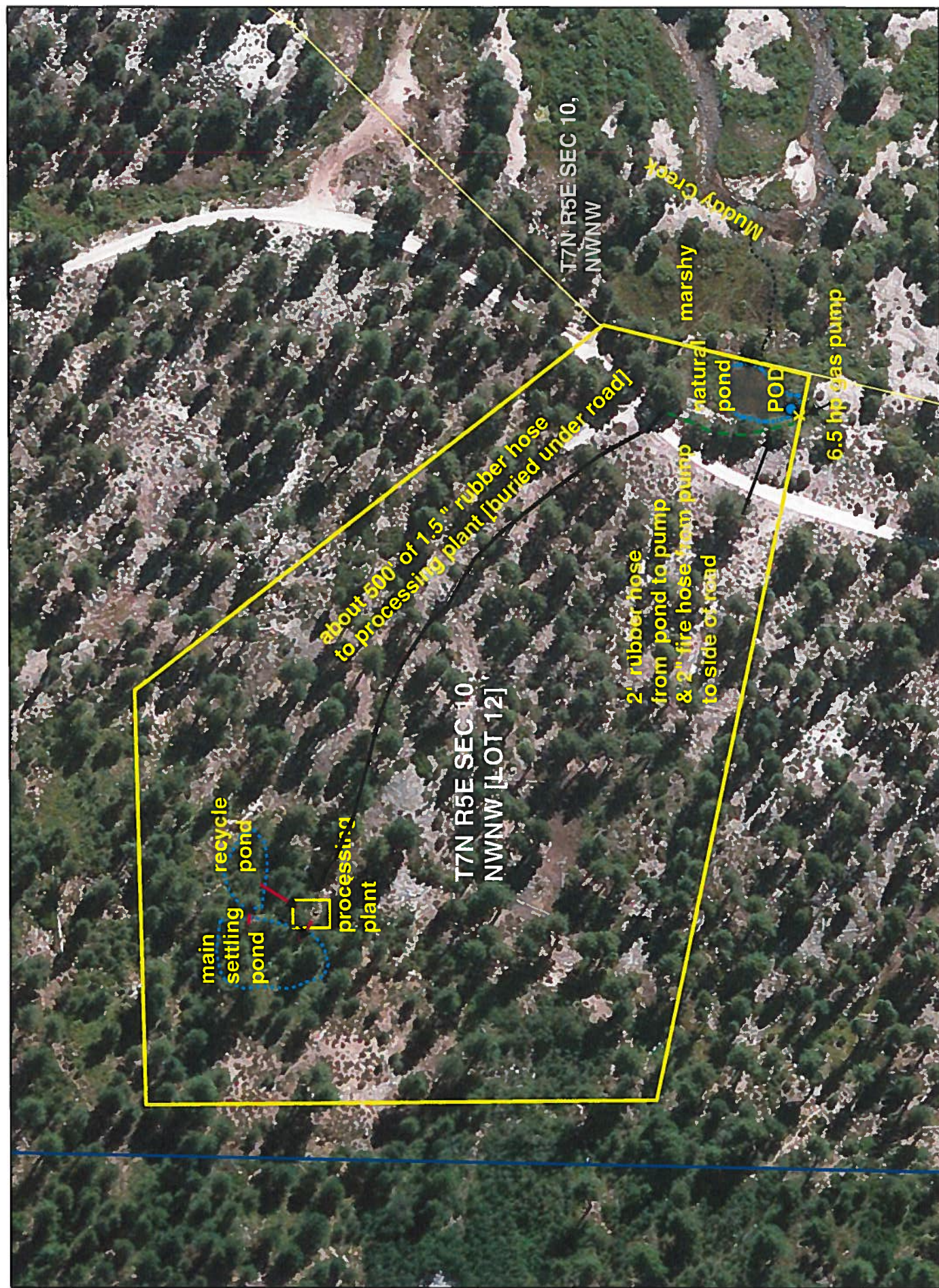
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

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

I. AUTHENTICATION

Field Examiner's Name Wiley Miller Date 9-7-12

Reviewer _____ Date _____



63-12377 - 2011 Bing photography. Place of use outlined in yellow.

63-12377 Field Exam photographs



POD – pond seen left back. 6.5 hp motor and pump diverting through 2" hose from creek.



Pipe to pump in pond.



2" black pipe that runs under Buckskin Rd., and then connect to a 1.5 ' diameter hose pipe to processing plant. Plant is about 500 feet from pump.



Hose pipe connected to trommel on day of exam.



Water flows from trommel to settling pond.



Another view of processing plant. Dump truck bed also used to wash tailings.