

MEMO

To: File 65-13825 Barnes

From: Sandy Hemenway

Date: 12/28/2010

REF: Licensing Review Memo

The **Permit to Appropriate** was approved on 4/26/1999 for both the POD and POU being located in T9N R4E Sec 35 SWSW. Proof of beneficial use was due on or before 5/1/2004. On 4/29/2004, **Proof of Beneficial Use** was submitted for 0.04 cfs, Domestic 1-home.

Ownership was confirmed via Taxlot Information, which was updated on 3/15/2010, shows the owner as Barnes Ventures Inc, C/O Southfork Landing.

The **Field Exam** was conducted on 4/24/2004 by Ed Squired, Hydro Logic.

The well is 325 ft deep, 6-inch casing, 1 1/2 Hp Franklin submersible (unknown make/model of pump), 50 psi, 1 1/4 inch discharge black plastic to pitless adapter below frost level of casing to frost free hydrant, and 1 1/4 inch to SW crawl space of the house, and a 120- gallon Flotec hydro pneumatic tank. External use is from hydrant using a hose to sprinklers for landscape surrounding the house. The location of the POD is a few feet off the west wall of the detached garage at 20 Charter House Rd. Common name for this well is well #3 Hill of the Doves Well.

POU Overlaps within the same quarter-quarter are: 65-11324 owner Barnes Venture, Inc. (aesthetic, irrigation, and stockwater---source: Payette River), 65-8850 owner Barnes Venture, Inc (aesthetic---source: Payette River); two Domestic water rights both owned by Wilson: 65-10673 (Alder Ck.), and 65-10672 (groundwater).

There are no **POD Overlaps** from the same groundwater source.

There are notes in file dated 2/10/1999 that indicated that the legal description and placement on map had changed, per Dan Nelson. Notification had been sent to the attorney in reference to these changes. With the 4/24/2004 field exam, the actual location for the POU for this house, and POD were confirmed to be T9N R4E Sec 35 NWSE. These changes **required an amendment for licensing**.

RECOMMENDATIONS:

CFS (different methods of calculating):

(1) Well Drillers Report: $30 \text{ gpm} \times 0.00223 = 0.0669 = 0.07 \text{ cfs}$

(2) Pipe Conversion: $1 \frac{1}{4} \text{ inch} = 0.04 \text{ cfs}$ ($Q = 5 \times 3.1416 \times R\text{-squared}$) $R = (\text{diameter}/12)/2$

(3) During the 4/24/2004 Field Exam, a 5-gallon bucket measurement was conducted: 5 gallons in 18 seconds or $16.6 \text{ gpm} \times 0.00223 = 0.037 = 0.04 \text{ cfs}$

RECOMMEND FOR LICENSING: 0.04 cfs

Volume

RECOMMEND FOR LICENSE: Domestic D-1 internal/external 1.2 af.

Well Proof Report

Receipt # W025204,
Permit No. 738459
Metal Tag No. D0009598,
Well ID # 289185
Water Right No.

Relationship: Owner/Operator
Name: JON L BARNES Phone:(208)345-7523
Address: 1401 SHORELINE DR
PO BOX 2797
BOISE ID 83701

Permit Status: Permitted

Well Location: Township 09N, Range 04E, Section 35, SE, SW, Government Lot
Number 006
COUNTY BOISE Lot 006 Block 002

Address of Well Site: CROSSTIMBER RANCH
GARDEN VALLEY ID

Use of Well: Domestic-Single Residence

Activity: New Well

Region: Western

Construction Method:

Const Start Date: Aug 04 1999 Const End Date: Aug 10 1999

Well Drilling Company: RAUCH DRILLING COMPANY (No. 570)

Card Hold Name: VERNON C RAUCH Phone:(208)462-3722 (No. 4488)

Certifying Official:

Date Received: Aug 25 1999

Date Approved: Aug 04 1999

Date Inspected:

Completed Depth: 325 FT Drilled Depth: Surface Diameter: 6 inches

Primary Flow Depth: Overall Temp: Static Water Level: 140

Head Pipe Length: Tail Pipe Length Production Rate: 30 GPM

Closed in Pressure: 0 Psi Bottom Hole Temp: 58 F. Low Temp Geothermal: NO

Control Device Desc:

Access Port Desc:

Casing

From	To	Diam	Type	Gauge	Join Type	Material
	300					

Seal

From	To	Material	Amount	Method
------	----	----------	--------	--------

Screen

From	To	Dia	Type	Slot Size	# of Slots	Material	Perforation Meth	Screen Type
------	----	-----	------	-----------	------------	----------	------------------	-------------

Lithologic Layer

From	To	Diam	Water	Color	Material	Texture
------	----	------	-------	-------	----------	---------

Drive Shoe

Depth	Test Description
-------	------------------

PIPE FLOWS -- PUMPING SYSTEMS

[properly designed @ 5 ft. / sec.]

$$Q = 5 \pi r^2 \text{ (r in ft.)}$$

$$Q = 5 \pi R^2 \text{ (R in ft.)}$$

$$R = (\text{diameter}/12) / 2 \left(\frac{\text{dia}}{12} \right) \div 2$$

$$\pi = 3.1416$$

<u>PIPE DIAMETER(")</u>	<u>CFS (1/100)</u>	^(1/10) <u>MINER INCH</u>	^(1/10) <u>GALLONS/ MINUTE</u>
1	.03	1.5	13.5
2	.11	5.5	49.4
3	.25	12.5	112.2
4	.44	22.0	197.5
6	.98	49.0	439.8
8	1.74	87.0	780.9
10	2.73	136.5	1225.2
12	3.93	196.5	1763.8
14	5.34	267.0	2396.6
16	6.98	349.0	3132.6
18	8.83	441.5	3962.9
20	10.90	545.0	4891.9
22	13.19	659.5	5919.7
24	15.70	785.0	7046.2

THEORETICAL PSI's

Internal domestic	- 20 psi
Internal/external domestic	- 30 psi
Domestic w/ 5-10 acres	- 40 psi
Medium systems (up to 50 acres)	- 40 psi
Large pivots	- 60 psi