

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 61-7690

Exam Date: 9/18/2012

1. Current Owner: COLD SPRINGS FARM
PO BOX 105
HAMMETT ID 83627
(208)366-7993
2. Accompanied by: William (Bill) Ringert
Phone No: (208)366-7995, or cell: (208)863-6697
Address: PO Box 105 Hammett, ID 83627
Relationship to Permit Holder: current owner

3. **SOURCE****TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None. 2-2336F is for application from Snake River for irrigation but does not overlap this POU. There are numerous water rights for King Hill Irrigation that overlap this POU. The current owner owns shares from King Hill Irrigation, which is the primary source of irrigation for this POU.
2. Other water rights with the same point of diversion: None. 61-7653 is for a different well, according to the file (drilled 9/10/1990) for irrigation, but there is an Order Granting Petition for Reconsideration for this water right, with documents due 6/1/2012 (no documents are in the file).

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW1/4SW1/4 Sec. 25, Twp 05S, Rge 08E, B.M. ELMORE County

Method of Determination: Garmin GPS map 76S, and ArcMap 2011 imagery

2.

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
05S 08E 24	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	40.0 40.0
05S 08E 25	40.0		39.0	36.0			28.0	37.0	16.0	10.0							206.0

Total Acres: 246

PLACE OF USE: COMMERCIAL

Twp Rge Sec	NE				NW				SW				SE				Totals
05S 08E 25	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	X

PLACE OF USE: FIRE PROTECTION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05S	08E	24																X	
05S	08E	25	X		X	X			X	X	X	X							

Method of Determination: Garmin GPS map 76S, and ArcMap 2011 imagery

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

4.

Well or Diversion

<u>ID No.*</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>
12 inch casing	Berkley, 3-phase, 7.5 Hp		652BH pump		unknown

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

D. FLOW MEASUREMENTS1. **Measurements:**

Due to the end of the season, and this being a supplemental well, this source was not actively being used. For this reason, a theoretical, and other calculations were used, in addition to statements from Hiddleston Drilling and Pump (who actively works on wells for William Ringert), Pete Bybee/Glynn's Electric (208)590-1295, who installed the pump), nozzle conversions, and historical use from William Ringert.

Theoretical:

The following information was obtained from an email sent by: Gary2hiddlestondrilling.com
 Static = 42'; the system runs between 40 – 60 psi, there is a 7.5 Hp Berkley, 3-phase pump
 $(8.8 \times 7.5 \text{ Hp} \times 0.7 \text{ eff.}) / [52 \text{ ft lift} + 40 \text{ psi} \times 2.31] = 0.32 \text{ cfs}$

@40 psi = 0.32 cfs
 @45 psi = 0.30 cfs
 @50 psi = 0.28 cfs
 @55 psi = 0.26 cfs
 @60 psi = **0.24 cfs**

Bill Ringert stated that historical use of this well, the diversion rate has been 100 gpm $\times 0.00223 = 0.22 \text{ cfs}$
Per 11/15/2012 phone conv. w/Pete Bybee, he is in agreement with this estimation, although he has no records on file to confirm this.

Bill Ringert stated at the time of the field examination that the system ran at 40 – 45 psi, and that 30 (1/8 inch) nozzles can be run at one time. For this reason, this value was used to calculate the nozzle calculations (the water from this system can be moved throughout the distribution system, with the mains acting as storage, in the section where the nozzles are being used. This would be used in the event there is inadequate supply from the primary source (King Hill Irrigation) or if King Hill Irrigation has shut down their supply for maintenance of their system and cannot deliver to the pumping station. **Using the U of I Nozzle Discharge in Gallons Per Minute chart:** @40 psi, 1/8 inch nozzle = 2.96 gpm per nozzle $\times 30$ nozzles run at one time = 0.20 cfs
 @45 psi, 1/8 inch nozzle = 3.13 gpm per nozzle $\times 30$ nozzles run at one time = **0.21 cfs**

RECOMMEND 0.22 cfs as the capacity of the system for this well, based on the calculations above.

D. FLOW MEASUREMENTS (continued)**1. Measurements (continued):**

From information on the previous page, the recommended capacity of the system for this well is 0.22 cfs.

Irrigation:

0.22 cfs @ 0.02 cfs would be equivalent to 11.0 acres irrigation if it were used in just one area. Instead, is a supplemental source to the King Hill Irrigation, in the event that supply is insufficient, or ceased due to King Hill Irrigation doing maintenance to their system. This amount can cover a much larger area if it is used solely to irrigate the vineyard since this system is on a drip system consisting of 10 lines per valve box, length of each line averages 450 ft, with an average of 225 emitters per line, with an average of 67 lines running at one time (2 gph emitters). In the event rainbirds are the method of irrigation, (30) 1/8 inch rainbirds can be run at one time (see calculations shown on previous page).

Fire Protection:

0.22 cfs (same as the capacity of the system)

Commercial:

Taking the volume calculations, listed below under E., and working in reverse gives us the diversion rate for commercial use.

(4978880 gallons/year)/260 days throughout the year employees work & events = (19149.53846 g/d)/1440 min/day = 13.298296 gpm X 0.00223 = 0.03 cfs

RECOMMEND:

0.22 cfs capacity of the system

Irrigation: 0.22 cfs

Fire Protection : 0.22 cfs

Commercial: 0.03 cfs

Total Diversion Rate: 0.22 cfs

E. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: 0.22 cfs, @0.02 cfs/acre = 11 acres irrigation (although this is not a fixed 11 acres where it is irrigated, but instead supplemental within the PPU).

$$V_{I.R.} = (11.0 \text{ Acres Irrigated}) \times (4.0 \text{ Irrigation Requirement}) = 44.0 \text{ af}$$

$$V_{D.R.} = [0.22 \text{ Diversion Rate (cfs)}] \times (260 \text{ Days in Irrigation season}) \times 1.9835 = 113.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 44.0 \text{ af}$$

2. Volume Calculations for Other Uses:

Fire Protection: No volume listed on License.

Commercial Use (taking information from Table 1 Planning Guide for Water Use): The information below was obtained from Bill Ringert. He stated that no additional water was utilized for washing grapes, etc.

(a) Day workers (office/shift) = 15 gpd X 8 employees X 5 days/week = 600 gpw

(b) Office Fixtures (1 – 50) = [(1.1 gpm/fixture X 12 fixtures) X 1440 minutes/day] X 5 days/week = 95040 gpw

(c) 2 toilets X 5 gpd/toilet = 10 gpd X 5 days/week = 50 gpw

(d) Picnic area w/toilet (2 events/year) = 10 gpd/person X 300 people/year = 3000 gpy

Total gallons per week = (a) + (b) + (c) = 95690 gpw X 52 weeks/year = 4975880 gpy + (d) = 4978880/325,892 = **15.3 afa**

RECOMMEND:

Irrigation: 44.0 afa

Fire Protection (no volume listed on license)

Commercial: 15.3 afa

No total annual volume listed on the license, since this is a supplemental source to the PPU. Instead, it will be limited within the conditions.

F. NARRATIVE/REMARKS/COMMENTS

The main source that supplies irrigation for the POU is from King Hill Irrigation District (shares). The pump station for the King Hill Irrigation source is on the south side of the freeway, with a buried line under the freeway to a 15 inch steel main that runs east and west along the south boarder of the property.

The groundwater source is a supplemental source and is used when King Hill Irrigation source is off-line for repairs, or to supply the winery mainly. The groundwater source is used for commercial use of the winery; fire protection for the fields, winery area, and buildings; and irrigation for the crops/winery/lawns and landscape. Per Mr. Ringert, if the King Hill water supply is low or off, the groundwater source can be pumped throughout the distribution system, but only (30) 1/8 inch nozzles at one time, at 40 - 45 psi. Using the U of I nozzle conversion sheet, this would indicate 0.20 cfs - 0.21 cfs.

Bill Ringert stated that the diversion rate is 100 gpm (0.22 cfs) which corresponds with the nozzle conversion calculations. The rest of the information that was obtained from Hiddleston Drilling and Pump indicated that the system runs between 40 - 60 psi; that the well is 500 ft deep, with the static level of 42 ft. There is a 7.5 Hp Berkley, 3-phase, 652BH pump. An email from: Gary2hiddlestondrilling.com stated that they never tested this well. On 11/5/2012, when I contacted the individual who installed the pump: Pete Bybee/Glynns Electric (208)590-1295, he stated that the 6/13/1994 letter from Ringert and Clark anticipating 450 gpm from this well, was too high, that the 100 gpm stated earlier by Mr. Ringert was more realistic, but Pete Bybee was unable to find his records of what was actually pumped.

The existing 12 inch casing well was drilled in 1964 by Joe Lamb. The commercial use consists of the office and buildings, 12 fixtures, 8 employees, 2 restrooms, no kitchen; usually only having 2 events per year with about 150 people at each event; and produce 4000 cases of wine per year (12 bottles per case).

The well for 61-7690 is located there where the King Hill source first make the T on the north side of the freeway (south border of the POU) and forms the 15 inch steel main. There is a shut off valve and backflow connection valve there where in the event ground water is needed, it can be run into the same distribution system that is used by the King Hill Irrigation water. Moving east on the 15 inch steel main, it then turns 90 degrees and runs north, reducing to an 8 inch steel line. Splitting off of the 8 inch line, running east and west is a 10 inch steel line (all pipe is buried throughout the system). At the vineyard the 10 inch line makes a 90 degree turn running north, then splits off and runs east reducing to an 8 inch PVC line along the border between Sec 24 SESE and Sec 25 NENE. Off of the main are risers for attaching 3 inch aluminum handline with 1/8 inch rainbird nozzles, which are used throughout the fields.

In the vineyard, there is a 4 inch buried main that reduces to 1 1/2 inch. On each valve box of the 4 inch main are 10 lines with emitters 3 ft apart (producing 2 gph); the average length of the line/row is 450 ft with 225 emitters per line; 67 lines can run at one time. Around the buildings are faucets with hoses and misc nozzles for irrigating the lawn and landscaping.

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

G. 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	0.220 CFS	44.00 AF
COMMERCIAL	01/01 to 12/31	0.030 CFS	15.30 AF
FIRE PROTECTION	01/01 to 12/31	0.220 CFS	

Totals: 0.220 CFS

2. Recommended Amendments

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

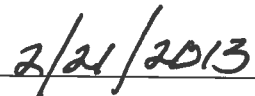
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

H. AUTHENTICATION

Field Examiner's Name



Date



Basin	Sequence	Suffix	Process	Basis	Status	Draft	RightID	Priority	Date	Diversion	Rate	Source List	Water Use List	Current Owner
37	4112		Water Right	Decreed	Active	N	583992	3/26/1902		300.000		MALAD RIVER	IRRIGATION, STOCKW KING HILL IRRIGA	
37	21595		Water Right	Decreed	Active	N	645020	4/1/1909		70.000		MALAD RIVER	IRRIGATION	KING HILL IRRIGA
61	7690		Water Right	License	Active	Y	658972	4/25/1994		0.220		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
61	7690		Water Permit		Active	N	547689	4/25/1994		1.000		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
37	4112		Claim	Statutory Claim	Active		601925	3/26/1902		300.000		MALAD RIVER	IRRIGATION, STOCKW KING HILL IRRIGA	

POU Overlap for T5S R08E Sec 24 SESE

No Overlap

Basin	Sequence	Suffix	Process	Basis	Status	Draft	RightID	Priority	Date	Diversion	Rate	Source List	Water Use List	Current Owner
37	4112		Water Right	Decreed	Active	N	583992	3/26/1902		300.000		MALAD RIVER	IRRIGATION, STOCKW KING HILL IRRIGA	
37	21595		Water Right	Decreed	Active	N	645020	4/1/1909		70.000		MALAD RIVER	IRRIGATION	KING HILL IRRIGA
61	7690		Water Right	License	Active	Y	658972	4/25/1994		0.220		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
61	10543		Water Right	Decreed	Active	N	208025	6/30/1925		0.060		GROUND WATEF DOMESTIC, STOCKWA WHITWORTH, HER		
2	2336 F		Water Permit		Active	N	7101	9/25/1964		12.800		SNAKE RIVER	IRRIGATION	COLD SPRINGS PF
61	7690		Water Permit		Active	N	547689	4/25/1994		1.000		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
* 61	7653		Water Application		Active		50602	9/10/1990		3.380		GROUND WATEF COMMERCIAL, DOME COLD SPRINGS PF		
37	4112		Claim	Statutory Claim	Active		601925	3/26/1902		300.000		MALAD RIVER	IRRIGATION, STOCKW KING HILL IRRIGA	

POU Overlap Sec 25

No Overlap

Basin	Sequence	Suffix	Process	Basis	Status	Draft	RightID	Priority	Date	Diversion	Rate	Source List	Water Use List	Current Owner
61	7690		Water Right	License	Active	Y	658972	4/25/1994		0.220		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
61	7690		Water Permit		Active	N	547689	4/25/1994		1.000		GROUND WATEF COMMERCIAL, FIRE PI COLD SPRINGS FA		
* 61	7653		Water Application		Active		50602	9/10/1990		3.380		GROUND WATEF COMMERCIAL, DOME COLD SPRINGS PF		

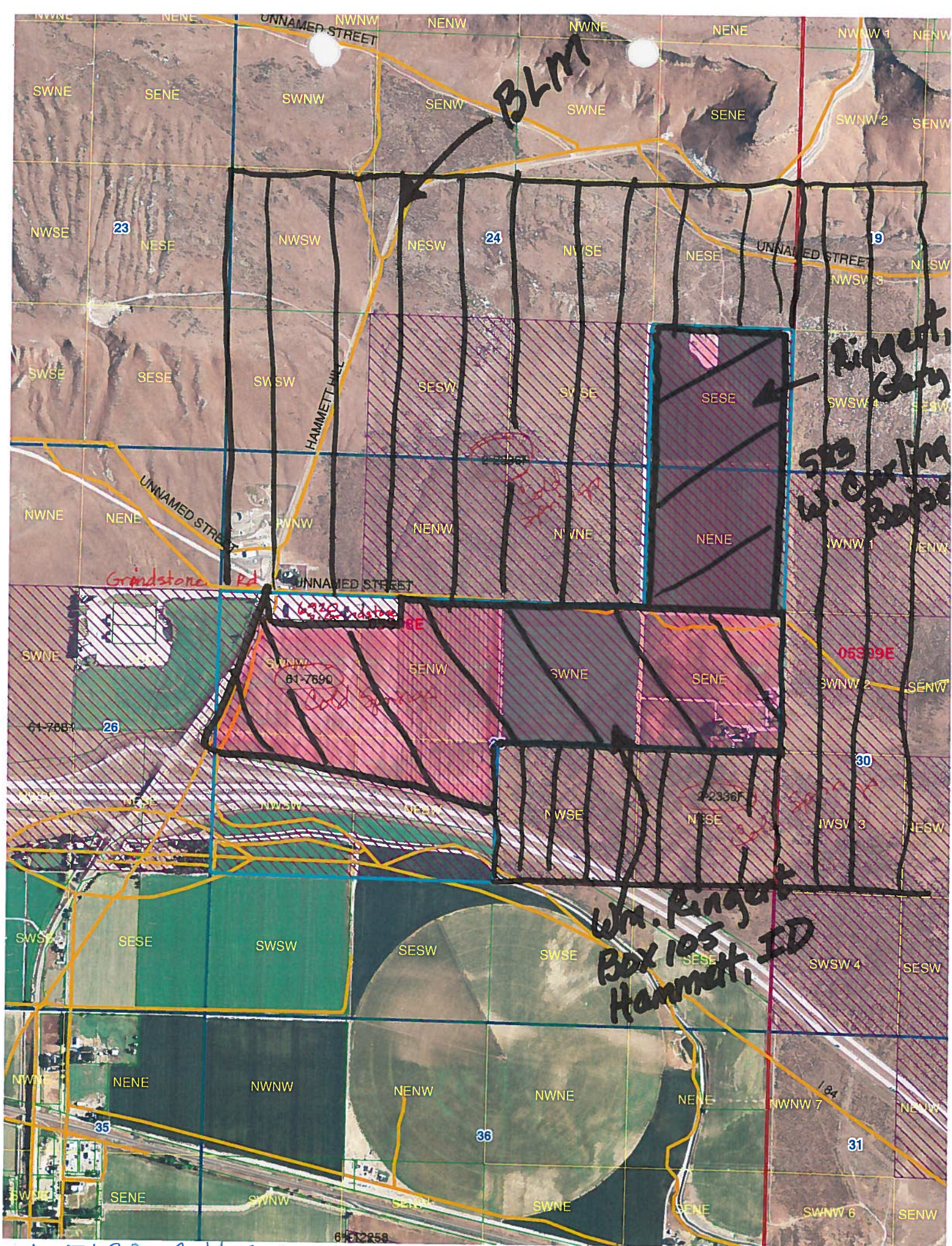
POD Overlap T5S R8E Sec 25 NWSW

No Overlap

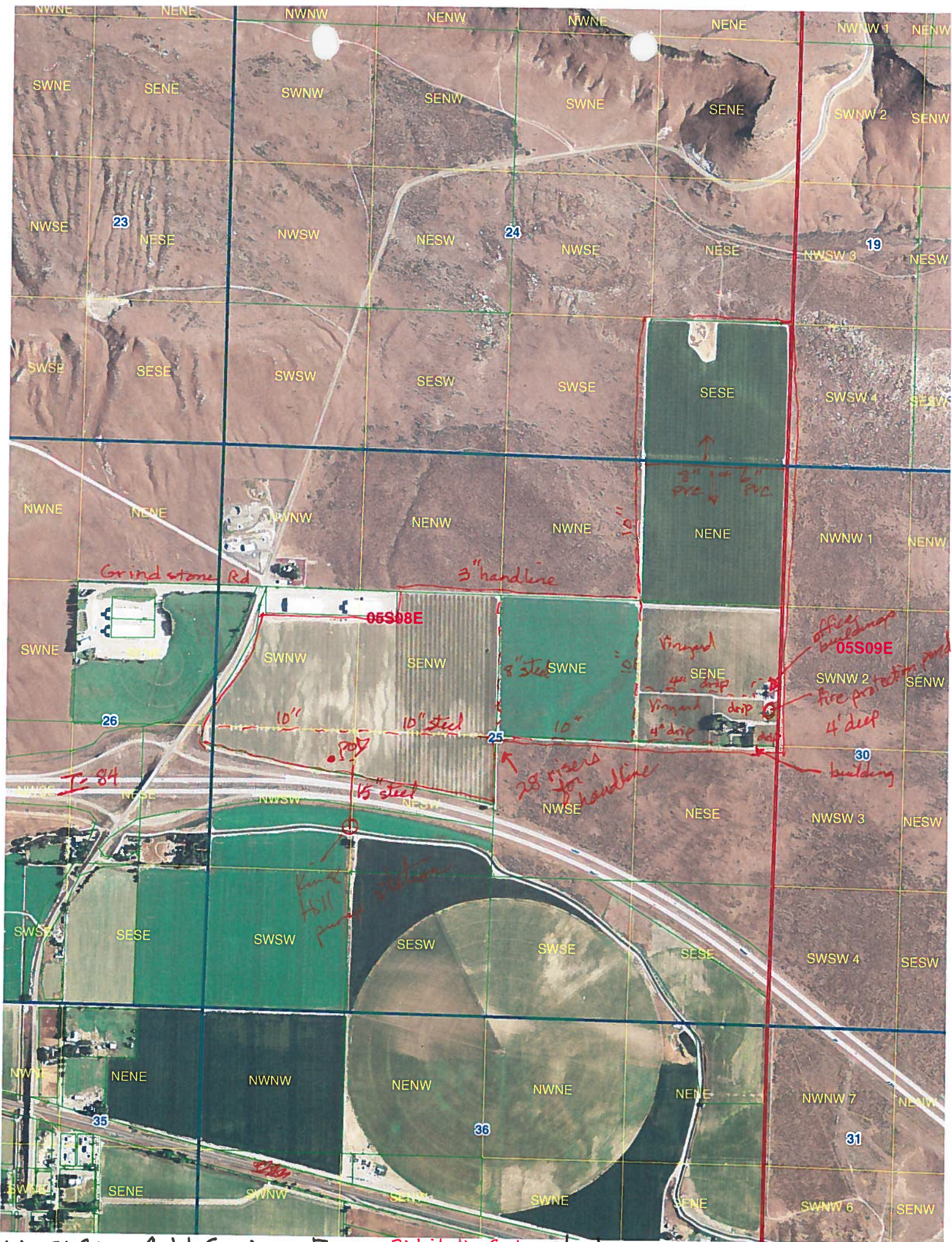
9/10/1990 well (different source)
 *61-7653 Order Granting Petition for Reconsideration (submit documents by 6/1/2012;
 none found scanned in file)

2-2-336 F application from Snake River; irr. (no overlap)

POU/POD Overlaps : None



121-71291 Ad Springs Tenn - PAI. all







POU:
vineyard
4" main
reduces
to 1/2"
poly,
10 lines
per
valve
box;
2 gallon
per hour
emitters
drip
system;
each
grape
vine is
3' apart.

POU:
Fire
Protection
4' deep
pond,
plus
sprinklers



POU
~~winery~~
winery
plant
+
tasting
rooms
+
2 events
per
year
with
150
people
per
event;
12 full
time
employees
2 restroom
no kitchen
4000 cases
wine/year



PDU
commercial
winery
plant,
vineyard

PDU
irrigation



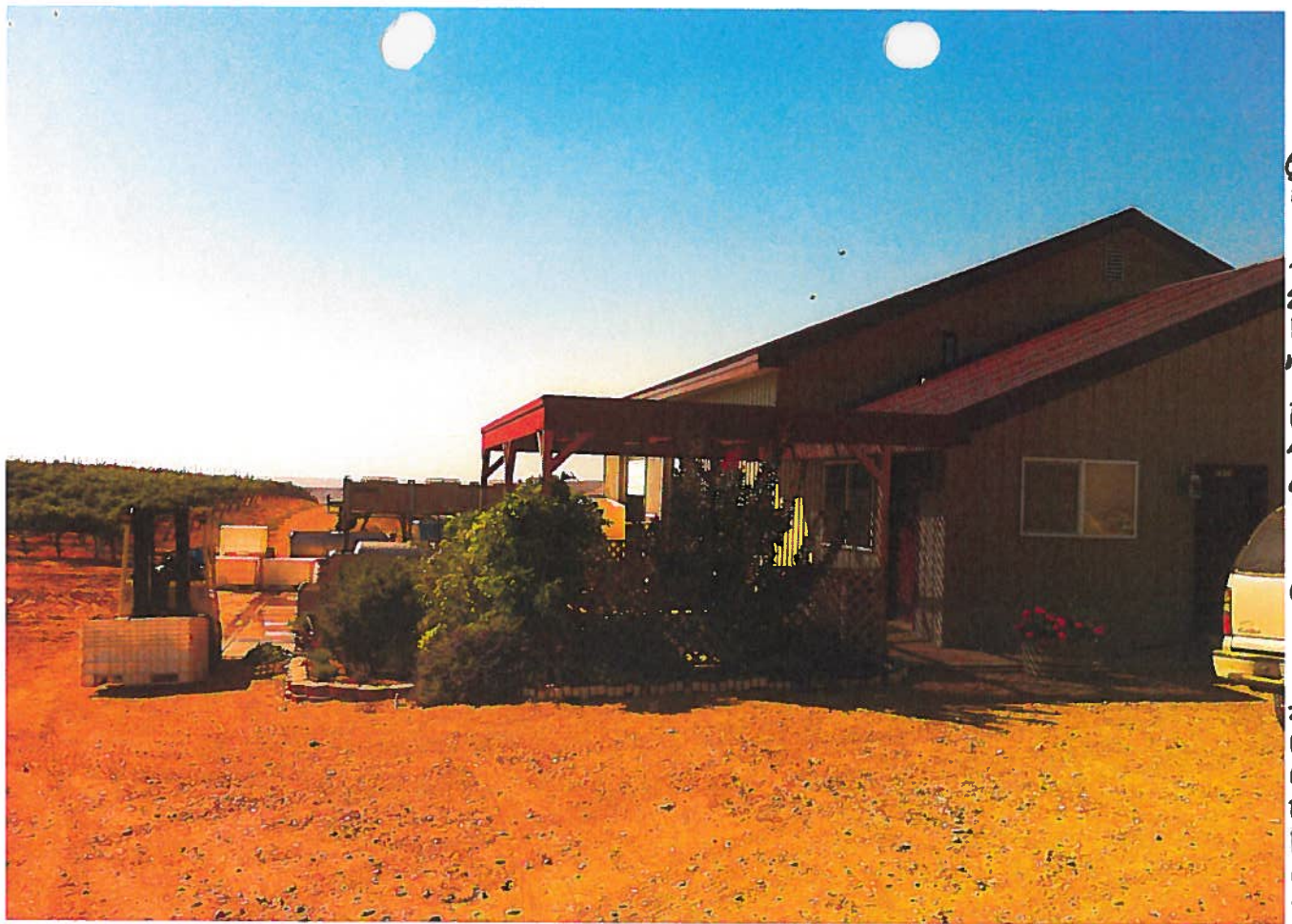
King
Hill

this is
the
surface
water
system
(primary
source)
that is
located
on
south
side of
freeway
& uses
the
same
distribution
system

61-7690 Cold Springs Farm

9/18/2012

S. Hemmerway



Commercial
use:
12
fixtures
8 employees
1 restroom
no kitchen
produce
4000
cases
per
year
(12
bottles
per case
2 events
per year
with
150
people
per
event



12"
casing
1970,
Joe Lamb
448' deep
POD
7.5 Hp
unknown
make/
model;
Darrel
Babee
with
Glynn's
Electric
not been
tested
(~~POD~~);
used in
Spring +
Summer
when
King Hill
surface
water is
shut
off. 42
status
(coverage
in area)

61-7690 Cold Springs Farm

9/18/2012

S. Hernerway

Hemenway, Sandy

Subject: FW: Water Right 61-7690, Well/Pump Questions

Importance: High

The following questions were answered by Gary on Tuesday 12/4/2012 (shown in "red"), via a phone conversation (208)587-9055:

From: Hemenway, Sandy
Sent: Monday, December 03, 2012 11:03 AM
To: Hemenway, Sandy; gary2@hiddlestondrilling.com
Subject: RE: Water Right 61-7690, Well/Pump Questions
Importance: High

Hi Gary,

I was wondering if you had time to check into finding any information on the well for Cold Springs Winery. I'm trying to write up the License for their water right, but I'm missing some information. Bill thought that you could help me out with answering the questions listed below.

Thanks so much for any help you can give me.

Sandy Hemenway
IDWR State Office, Boise
(208)287-4920

From: Hemenway, Sandy
Sent: Monday, November 05, 2012 3:05 PM
To: 'gary2@hiddlestondrilling.com'
Cc: Hemenway, Sandy
Subject: Water Right 61-7690, Well/Pump Questions

Hi Gary,

I am working on the water right license for 61-7690 Cold Springs Farm (Cold Springs Winery). It is owned by Bill Ringert. Bill stated that Hiddleston Drilling had taken a video of the well. This is the 12" casing well that is located northeast of Exit 112, Hammett, in the alfalfa field (southeast of the potato storage building, on the north side of the freeway)

So, here are my questions, if you can help me:

- (1) What is the depth of the well? 500
- (2) By chance do you know the Hp, make/model or serial number of the pump? 7.5 Hp Berkley, 3-phase, 652BH, run system at 40 – 60 psi
- (3) Do you know what the static level was? 42
- (4) If a pump test was conducted, what was the rate of diversion (gallons per minute)? How long was it tested? They never tested it.
- (5) Do you happen to know who drilled that well, and/or when? unknown

If you can get back with me within the next couple weeks, it would be greatly appreciated. I appreciate any help you can give me.

Thank you so much,

Sandy Hemenway
Sr. Water Resource Agent
IDWR/State Office
PO Box 83720 or 322 E. Front St.
Boise, ID 83720-0098
OFFICE: (208) 287-4920
CELL: (208) 761-0280
FAX: (208) 287-6700
Email: sandy.hemenway@idwr.idaho.gov

6TS Stainless Steel Subturbine Series - Windows Internet Explorer

berkeleypumps.com/ResidentialProduct_Series_6TS_Subturbine.aspx

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Favorites

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Property Room Auction De...

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Fresh Water Needs for Dair...

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PRODUCT IMAGES



6TS Stainless Steel Subturbine Series

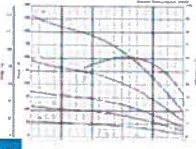
BERKELEY 6TS Series Pumps feature heavy-duty 304 stainless steel construction and hard chrome wear surfaces that will outperform ordinary fabricated stainless steel pumps in aggressive water conditions. The state-of-the-art design includes 100% lead-free components with high efficiency performance in 6 hydraulics up to 400 GPM and 60 HP.

(100% lead-free components meet all U.S. Federal guidelines for safe drinking water.)

KEY FEATURES

- Heavy-Duty, Investment Cast 304 Stainless Steel Discharge assures secure connection to drop pipe. Wrench flats provide positive grip during installation.
- Built-In Check Valve (optional) prevents backflow and reverse rotation.
- Hard Chrome-Plated Top Bearing Journal reduces abrasive

PERFORMANCE



1 2 3 4 5 6 7

8 9 10 11 12

ACCESSORIES

- HITACHI 6" - 14" SUBMERSIBLE MOTOR SERIES FOR AG/IRRIGATION
- PENTEK® XE SERIES™ RESIDENTIAL 4" SUBMERSIBLE MOTOR SERIES
- PENTEK® CONTROL BOX SERIES

Internet

100%



Spot Watering Emitters

Drip Irrigation System

For plants that need extra water, insert 1.0 and 2.0 GPH spot watering emitters, branching from main 1/2" tubing lines to reach trees, potted plants or other targeted areas.

- Ideal for extending irrigation to widely spaced plants or trees.
- Increases flow to selected plants as needed anywhere in your landscaping.



[Features](#)

[Models](#)

[Drip Irrigation FAQs](#)

[Manuals & Literature](#)

Using Spot Watering Emitters & 1/4" Tubing Stakes

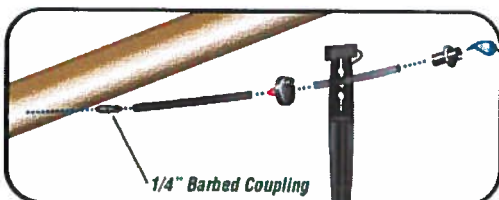
Tap off of 1/2" Tubing with Spot Watering Emitters and 1/4" Tubing. Black Spot Watering Emitters provide controlled flow of 1.0 GPH. Red Spot Watering Emitters are rated for 2.0 GPH. The tubing can be held in place with 1/4" Tubing Stakes. Place bug guard (attached to 1/4" Tubing Stake) at end to prevent bugs and debris from clogging tubing.

Spot Watering Emitter	Gallons Per Hour	Best For
 SW10-10PK (black)	1.0 GPH	Loamy Soils
 SW20-10PK (red)	2.0 GPH	Sandy Soils

1/4" Tubing Runs Less Than 5 Feet



Extended Runs Greater Than 5 Feet



Tip: For trees, place Spot Watering Emitter 2/3 of the way between tree trunk and outside of canopy. Larger trees require more than one emitter, equally spaced around trunk.

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[1/4" Distribution Tubing](#)