

MEMORANDUM

Date: November 18, 2013
To: Water Right File 63-10557
From: shemenway
Re: Field Report Narrative and Licensing Review

The well was drilled 5/16/1988 by Davis Well Drilling. It is a 10-inch casing (it is unknown how far the casing extends above ground level, psi, or size discharge). The well is 170 ft deep, with a 14 ft static. On the drillers report it states that it was drilled for domestic use and a Still (mint still). There was no indication on the drillers report that a pump test was conducted. The pump is a 7.5 Hp Franklin submersible 236016010 Jacuzzi 74NS6H2, with (2) md1220E Conair pressure tanks with a 2-inch discharge to the Still and house/office. The Still is a Sellars Eng. Co. and Boiler 400HpYGNIS SN6340, with input BTU 16740000, 230 V motor, 5-steam tanks for mint oil production. At the distillery, live steam under pressure is applied to the mint in the sealed tub to extract the oil. The steam and vaporized oil passes into a coil where the mixture is cooled and condensed. The water and oil then flow into a separator where the natural difference in density separates the oil (which floats on top) from the heavier water. The pure mint oil is tapped off the top into the storage tank. The waste water is recycled to feed the boiler to make steam to process the next batch. There is one single Domestic home located on the north side of Floating Feather (internal/external use, confirmed by ArcMap 2004 - 2011 imagery); an office/shop and outbuildings located on the south side of Floating Feather has 8-10 employees, a Still house which contains the boiler, mint still, and steam tanks for the Still (industrial use); The feed lots are for 500 head cattle (stockwater use). At the time of the field examination, the examiner did not conduct a physical measurement due to the mint Still being inoperative at the time of the exam. For this reason a theoretical was used for calculating the capacity of the system.

At the time of the licensing review, the new owners stated that they purchased the property, but that there was no still or tanks left on the property; they had all been removed. No operational information could be obtained from the past owner (not available or found). For this reason, other licensed water rights that involved stills were used to obtain the average number of hours that the system would run, to calculate the volume (10 hrs per day, during the season of use was the average).

CFS:

Domestic: Domestic 1-home 0.04 cfs (internal/external use)

Stockwater: 500 head cattle, Table 1 Recommended Diversion Rate 401 – 500 = 0.12 cfs

Allow 0.11 cfs (as permitted)

Industrial:

Theoretical with unknown psi, but using the average psi from other water rights for "stills."
 $(8.8 \times 7.5 \text{ Hp} \times 0.7 \text{ eff}) / [24 \text{ lift} + (55 \text{ psi} \times 2.31)] = 0.31 \text{ cfs}$ (allow, since there was no physical measurement, and it falls within the parameters of other peppermint still water rights that were already licensed).

Total Diversion Rate: 0.31 cfs

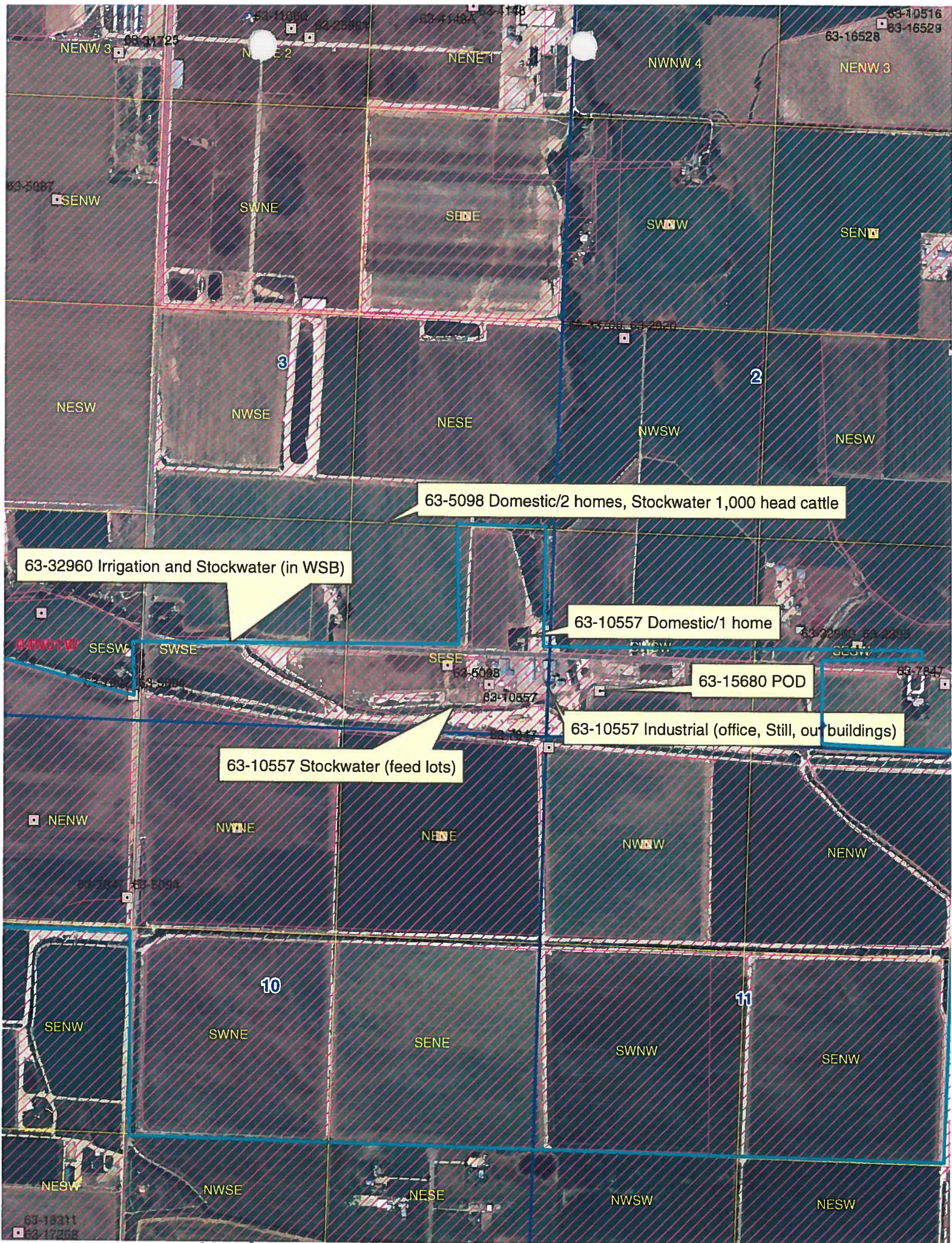
Volume (with system running 10 hrs/day during the season of use)

Industrial: $0.31 \text{ cfs} \times 123 \text{ days} \times 1.98 = 75.5 \text{ AF} \times 10 \text{ hrs}/24 \text{ hrs} = 31.5 \text{ AF}$

Domestic 1-home, IDWR Standard 1.2 AF for internal/external use = 1.2 AF

Stockwater: $\text{Vir} (500 \text{ head} \times 23 \text{ gpd} \times 365 \text{ days}) / 325,850 = 6.7 \text{ AF}$ $\text{Vdr} = 0.11 \times 365 \times 1.9835 = 79.6$
 $\text{V} = 6.7 \text{ AF}$

Total Annual Volume: 39.4 AF



63-5098 Domestic/2 homes, Stockwater 1,000 head cattle

63-32960 Irrigation and Stockwater (in WSB)

63-10557 Domestic/1 home

63-15680 POD

63-10557 Industrial (office, Still, our buildings)

63-10557 Stockwater (feed lots)

13 10557 Overlook

511



63-5098 Domestic/2 homes, Stockwater 1,000 head cattle

63-32960 Irrigation and Stockwater (in WSB)

63-10557

Hemenway, Sandy

From: Hemenway, Sandy
Sent: Thursday, June 20, 2013 8:02 AM
To: Scott King (sking@spfwater.com)
Cc: Hemenway, Sandy
Subject: 63-10557licensing review additional questions

Hi Scott,

Additional questions:

- (1) Water right 63-5098 overlaps the same POU (with a different groundwater source), and is for stockwater 1000 head cattle and domestic 2-homes. My question is this, do they have 1500 or 2000 head cattle total out there now, and 3-homes total on this POU? *for this WR D1*
go with 1500 head probably were there; 3-homes total office (no cows now or since place bought 2-yr's ago)
- (2) Which homes are connected to which wells? *Not sure*
- (3) Please have them outline and label the map I sent yesterday, for each of the POUs: Domestic, Stockwater, Industrial
- (4) I checked the other files, and found the ownership change form and warranty deed. My question is this: On the tax lot information, it shows 3858 N. Garden Center Wy. Ste 200, Boise, ID 83703, but on the ownership change form they have that address, and then they crossed it out and put in PO Box 1359 Caldwell, ID 83606 (208)890-4051. Which address and phone number am I using?

Thanks, *Thinks 3 homes are on 1 well, & the still is on another well.*

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

10/30/2013 scanned & re-emailed to Scott King. GH.

*10/31/2013 Answered received via phone call with Scott King. GH.
(208) 383-4140*

Hemenway, Sandy

From: Hemenway, Sandy
Sent: Wednesday, June 19, 2013 4:26 PM
To: Scott King (sking@spfwater.com)
Cc: Hemenway, Sandy
Subject: 63-10557 Licensing Review

Importance: High



DOC.pdf

6/29/2013 phone responses from Scott King - gff.

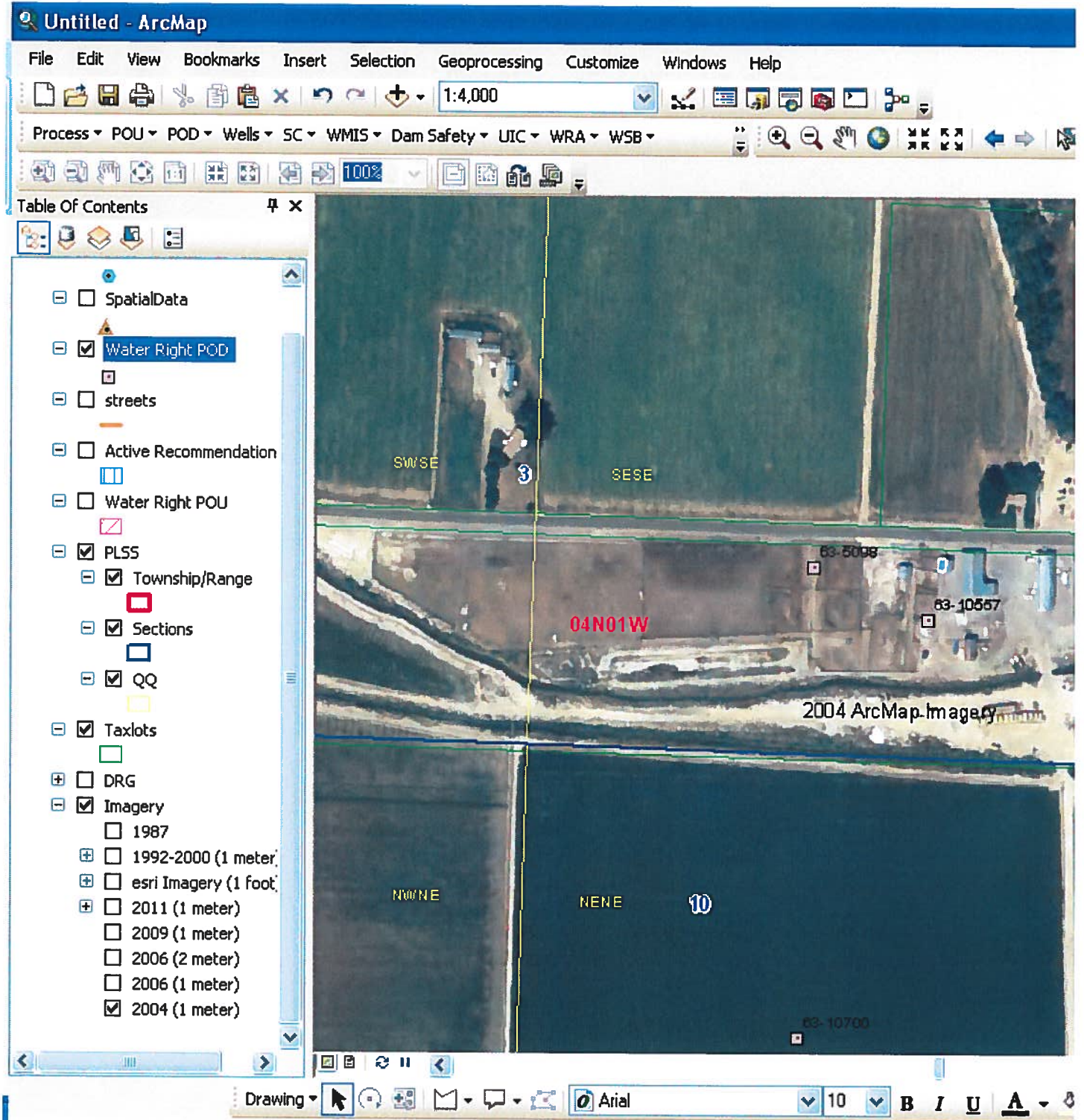
Hey Scott,

I have started the licensing review on 63-10557 earlier than anticipated. I have a few questions:

- (1) Are you the representative for this water right? *Y L*
- (2) Who is the contact person for this water right? We show the current owner as Eagle Sport Legends Investment (208)939-7300, which the number is disconnected. The Tax Lot Information that was updated on 3/27/2013 states Cloud Berry LLC as the current owner. *out of the picture*
- (3) Do you know what psi the system is run at (from the well, not from the boiler)? Discharge size off the well? *No*
- (4) Should an amendment be filed? No aerial was submitted with the field exam, only a topo map indicating a circle where the POU/POD were located. Should the Feed Lot be included that continues to runs into T4N R1W Sec 3 SWSE, for the Stockwater use component? Also should the buildings in Sec 2 SWSW be included in the Industrial use component?
- (5) Do you have any information as to how long the Still runs i.e. 24/7, and for how many months?
- (6) Do you know how much historically what their water usage has been? I was told by West Tech Boiler Works, who installs Mint Distilleries that most businesses know exactly how much water they use, since Mint Distilleries are like "gold."
- (7) Do you know how many days/year, hrs/day, the 8-10 employees work?
- (8) Do you know the number of fixtures in the office/shop? I.e. sinks, toilets, showers, etc.

*unknown
entire
system
was
dismantled
before
they bought
it*

Thanks,



Sandy Hemenway
Sr. Water Resource Agent
IDWR/State Office
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Boise, ID 83720-0098
OFFICE: (208) 287-4920 (today I'm here till 5pm; then 6/20/2013, Thurs. 5:30 am - 5pm; returning on Monday)
CELL: (208) 761-0280

FAX: (208) 287-6700

Email: sandy.hemenway@idwr.idaho.gov

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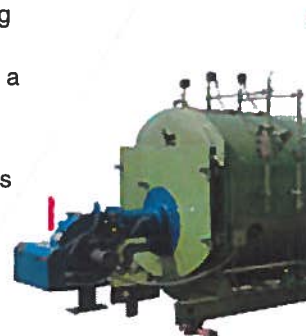


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Mint Distilleries



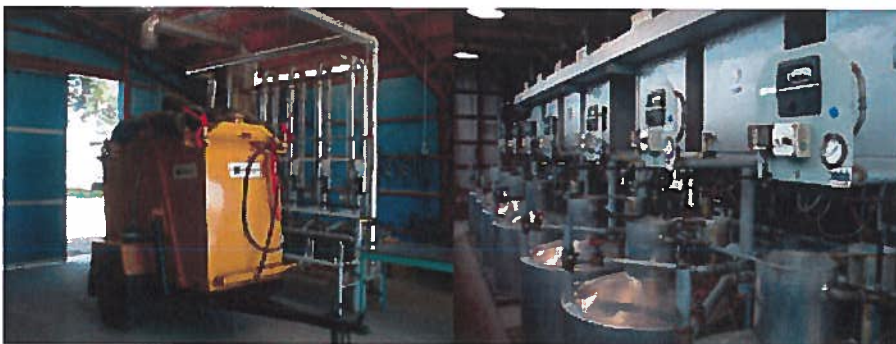
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Join us on December 5 for the 2013 Idaho Mint Convention at the Hampton Inn in Nampa, Idaho.

As a **participant**, you can either print the [pdf registration form](#) or [register online](#). As an **exhibitor** or **sponsor**, you either print a pdf registration form ([exhibitor](#) or [sponsor](#)) or [register online](#). We look forward to seeing you December 5.

History of Mint Growing in Idaho: Commercial mint growing started in Idaho in the early 1960's. In those days, geese and sheep provided effective weed and pest control in mint fields... until the animals acquired a taste for mint! Within ten years, growers recognized the need to insure the continuing high quality of their crop and established the Idaho Mint Commission. The Mint Commission, governed by growers, sets standards and funds plant and bio-technology research to benefit the mint industry. Today, one hundred mint growers continue the tradition of a clean industry producing pure, additive-free mint oil.

The Process: Peppermint is mechanically cut in July or August and cures in the windrows for several days to allow moisture to evaporate from the leaves. Then the mint is chopped and blown directly into a distilling tub mounted on a truck or trailer. At the distillery, live steam under pressure is applied to the mint in the sealed tub to extract the oil. The steam and vaporized oil pass into a coil where the mixture is cooled and condensed. The water and oil then flow into a separator where the natural difference in density separates the oil (which floats on top) from the heavier water. The pure mint oil is tapped off the top into a storage drum. The waste water is recycled to feed the boiler to make steam to process the next batch. The mint oil is sold to a "handler" who blends oils from different locations to the specifications of the end user.

The Land: Rich, fertile, volcanic soils along the Snake River plain and plenty of water combine with a climate of long warm summer days to make Idaho a prime location for mint growing. Idaho's dry climate during the months of August and September allows the cut peppermint to "cure" to perfection. The flavor and fragrance

of mint oil is determined by these natural conditions, and Idaho's mint oil ranks with the best.

The Plant: Peppermint is planted from certified rootstock and once planted will re-grow each year. Most growers rotate mint with other crops on a three to four year cycle. Research is producing disease resistant roots which keep the use of chemical pesticides to a minimum.

The Product: Toothpaste, mouthwash, and chewing gum manufacturers use about 90% of all the mint oil produced. The refreshing and soothing quality of mint oil makes it an ideal flavoring for these popular products. The remaining 10% is used for confections (ice cream, candy, cookies) and pharmaceutical flavoring.

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Crop Profile for Mint in Idaho

Prepared July, 2000



General Production Information

- Idaho ranks third nationally and accounts for 17% of U.S. peppermint (*Mentha piperita*) production. In 1999, Idaho harvested about 1,933,250 pounds of peppermint oil valued at \$19,950,000 from about 18,500 acres.
- Idaho ranks fourth nationally in spearmint (*Mentha spicata*, *M. cardiaca*) production. In 1999, Idaho harvested 200,000 pounds of spearmint oil (based on two cuttings) valued at \$2,307,000 from about 2,000 acres.
- Peppermint yields average 95 pounds of oil per acre and spearmint yields average 103 pounds of oil per acre.
- Annual production cost for mint production range from \$1,346-\$1,500 per acre for first year peppermint establishment and \$1,096-\$1,500 per acre for spearmint production.

Production Regions:

Of the mint grown in Idaho, 90% is located in Canyon and Ada counties. The remainder of mint acreage is located in the southern counties of Payette, Gem, Elmore, Gooding and Twin Falls, and the northern county of Kootenai.