

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-8363

Exam Date: 4/8/2015

1. Current Owner: MIKE VIERSTRA
2588 E 3500 N
TWIN FALLS ID 83301
(208)732-0576

And/or

SUSAN VIERSTRA
2588 E 3500 N
TWIN FALLS ID 83301
(208)732-0576

2. Accompanied by: Mike Vierstra
Phone No: 208-420-2078
Address: Same as above
Relationship to Permit Holder: Permit holder

3. SOURCETRIBUTARY

GROUND WATER

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 SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	SE1/4SE1/4	Sec. 35, Twp 10S, Rge 16E, B.M.
TWIN FALLS County		
GROUND WATER	SW1/4SE1/4	Sec. 35, Twp 10S, Rge 16E, B.M.
TWIN FALLS County		

Method of Determination: ArcMap aerial imagery, site visit

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
10S	16E	35															X	X	

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S	16E	35																X	

PLACE OF USE: COMMERCIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S	16E	35															X	X	

Method of Determination: ArcMap aerial imagery and site visit

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.

<u>Well or Diversion</u> <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</u> <u>Size</u>
East Well		5			
West Well		10			

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

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Performed a 20 minute flowmeter test while various operations were in progress around the dairy. The highest recorded or observed flow was 126.8 gpm or 0.28 cfs.

E. FLOW CALCULATIONS X Additional Computation Sheets AttachedMeasured Method: Flowmeter test yielded a flow rate of 126.8 gpm or **0.28 cfs**

Theoretical Rate of Flow Calculation: $Q = 8.8 \times \text{HP} \times \text{Eff.} / \text{TDH}$, where 8.8 is a constant, HP is pump horsepower, Eff is the estimated efficiency of the system, TDH is the total dynamic head calculated by PSI (system pressure in pounds per square inch) multiplied by 2.31, added to the pumping water level.

$$Q = 8.8 \times 5 (\text{HP}) \times 0.7 (\text{EFF}) / 235 (\text{feet of lift}) + (40 (\text{PSI}) \times 2.31) = 0.09 \text{ cfs}$$

$$Q = 8.8 \times 10 (\text{HP}) \times 0.7 (\text{EFF}) / 235 (\text{feet of lift}) + (40 (\text{PSI}) \times 2.31) = 0.19 \text{ cfs}$$

$$Q = 0.28 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NA

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

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

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

2. Volume Calculations for Other Uses:

Using the IDWR Dairy Spreadsheet with the figures supplied by Mr. Vierstra, volumes of 51.6 AF for stockwater and 0.6 AF for commercial were computed for a total volume of 52.2 AFA. Past records for the dairy from the Water Measurement Information System (WMIS) are very incomplete, and it appears that there may not have been a working meter in place during the development period. The meter(s) has frequently been broken, and many years of the record are incomplete. Three years- 2003, 2004, and 2009 (see attached sheet) were audited by IDWR personnel and appear to be a more accurate representation of the amount of water actually being used by the facility, which seems to be very inefficient in its water use. Of the three years, the 69.4 AF in 2009 is the highest and is recommended for licensing. Under Beneficial Use Exam rules, no volume is required on the domestic portion. Therefore, recommended volumes are:

Stockwater	69.4 AF
Commercial	69.4 AF
Combined	69.4 AF

G. NARRATIVE/REMARKS/COMMENTS

The field exam for permit 47-8363 was conducted on April 8, 2015 accompanied by Mike Vierstra, the owner of the dairy. Water for the dairy is drawn from 2 wells, one in the SESE of Section 35, T10S, R16E, with a 5 HP pump, the other located in the SWSE, with a 10 HP pump. Because the permit was issued with only one point of diversion, an amendment will be necessary. In addition, the permitted place of use was in the SESE, but has since expanded into the SWSE of Section 35, necessitating an amendment of the place of use.

After leaving the wells, water flows into a 5,000 gallon storage tank, before a booster pump disperses it out to the milking barn, where it is used for washing cows, floor washing, and other purposes. Numerous outdoor faucets are located throughout the premises, in addition to 14 water troughs. An overhead drop-faucet is in place to fill water trucks if necessary. Mr. Vierstras home is also served by this system. The other two homes on the property are supplied by a separate well not connected to this system.

Mr. Vierstra said that he has maintained the canal shares appurtenant to the original 11.5 acres that the dairy was developed upon. A flowmeter was present in the pump house at the time of the field exam, but was not functioning. I asked Mr. Vierstra about the number of cows present during the development period, and the number given (see attached dairy spreadsheet) was larger than allowed under conditions of the permit. However, that was almost 20 years ago, and it would be difficult to come up with an accurate estimate after that many years.

During the exam, a flow measurement was made on the system using a sonic flowmeter, which yielded a flow rate of 126.8 gpm or 0.28 cfs. Running the calculations to determine the theoretical rate of flow (see flow rate calculations) yields the same flow rate. Recommend licensing the domestic portion at 0.04 cfs, stockwater at 0.24 cfs, and commercial at 0.24 cfs., for a combined flow rate of 0.28 cfs.

Assigning a volume to the dairy is more difficult. Using the IDWR Dairy Spreadsheet with the figures supplied by Mr. Vierstra, volumes of 51.6 AF for stockwater and 0.6 AF for commercial were computed for a total volume of 52.2 AFA. Past records for the dairy from the Water Measurement Information System (WMIS) are very incomplete, and it appears that there may not have been a working meter in place during the development period. The meter(s) has frequently been broken, and many years of the record are incomplete. Three years- 2003, 2004, and 2009 (see attached sheet) were audited by IDWR personnel and appear to be a more accurate representation of the amount of water actually being used by the facility, which seems to be very inefficient in its water use. Of the three years, the 69.4 AF in 2009 is the highest and is recommended for licensing. Under Beneficial Use Exam rules, no volume is required on the domestic portion.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.240 CFS	69.40 AF
COMMERCIAL	01/01 to 12/31	0.240 CFS	69.40 AF
DOMESTIC	01/01 to 12/31	0.040 CFS	
<u>Totals:</u>		0.280 CFS	69.40 AF

2. Recommended Amendments

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

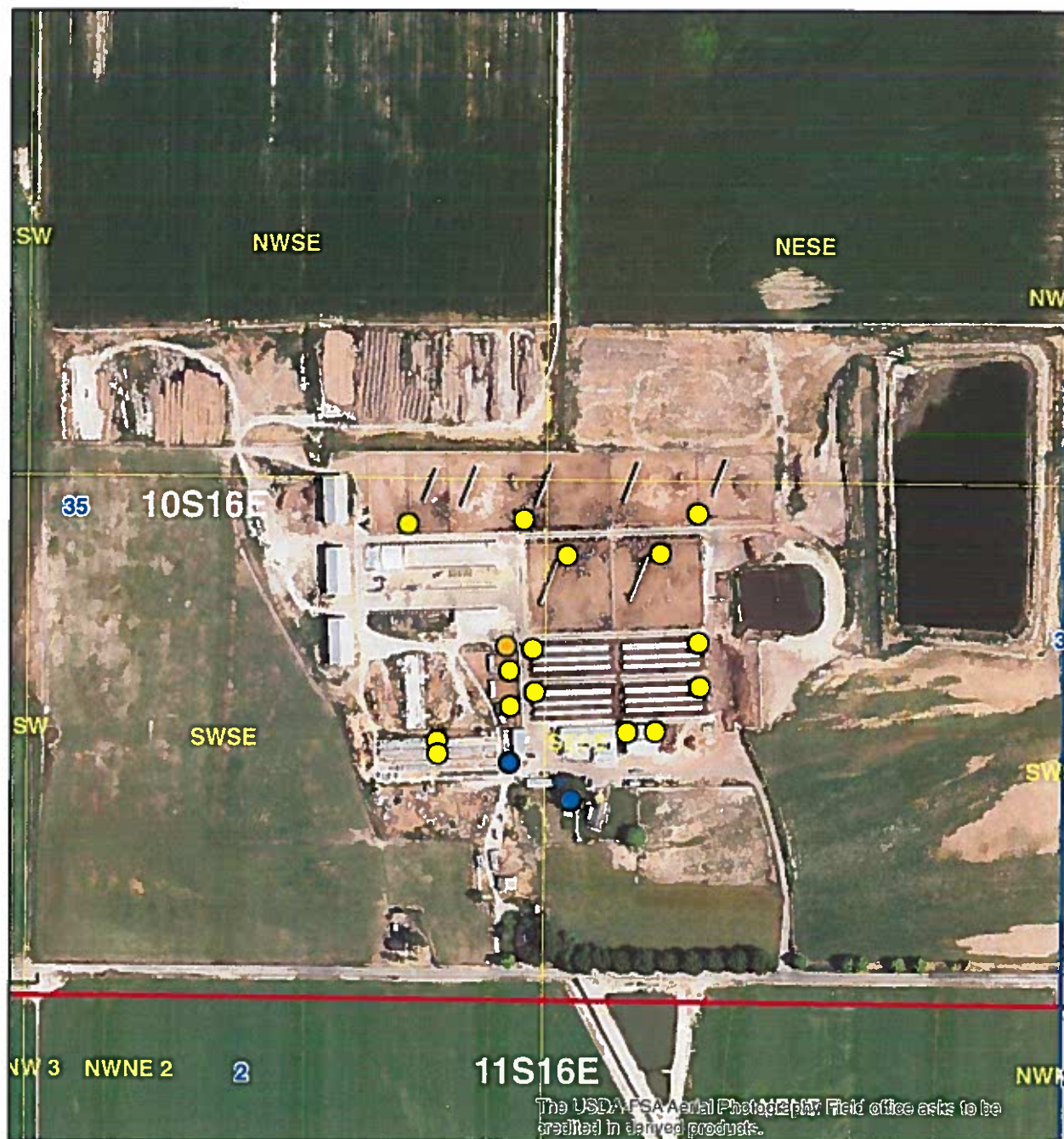
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name  Date 04/08/2015

Reviewer  Date 11/27/15

System Diagram



Legend

Vierstra 47-8363

-  Township/Range
-  Sections
-  QQ
-  Wells
-  Water Troughs/Faucets
-  Overhead Faucet (To Fill Trucks)





West Well

East Well





5000 Gallon Storage Tank

Plumbing Inside Pump House



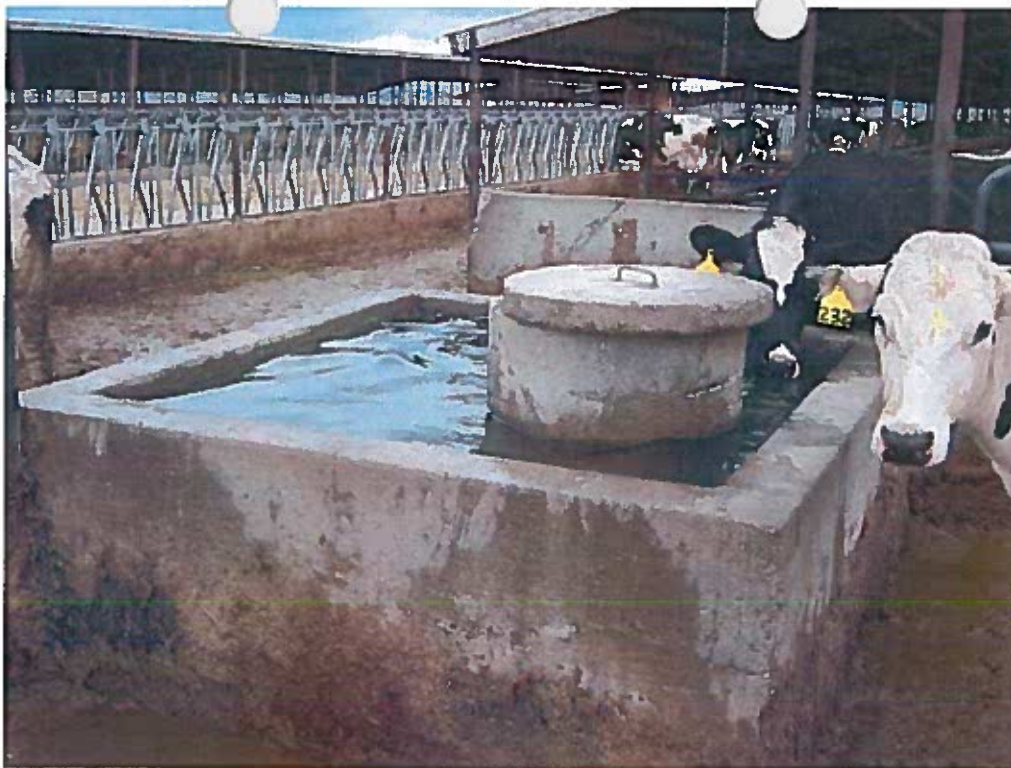


Flowmeter (not functioning at time of exam)

Vierstra Home – Domestic Portion of Permit



Vierstra 47-8363



Stock Trough on Milking Portion of Dairy



Stock Trough on Heifer Portion of Dairy



Outdoor Faucet in Heifer Area

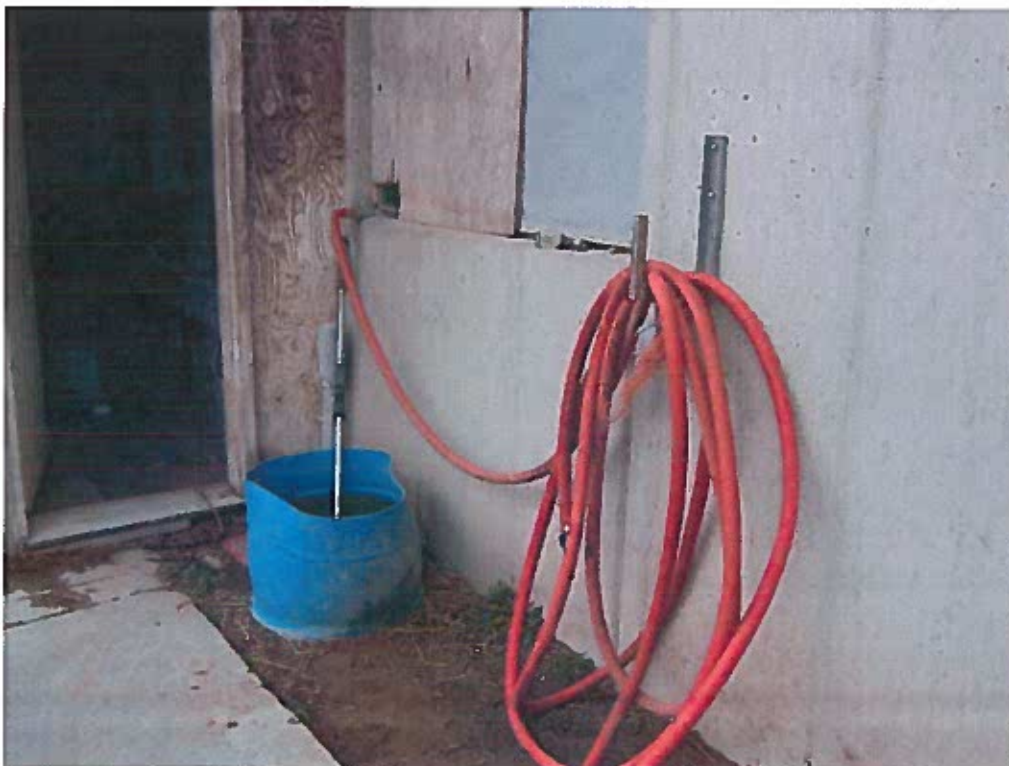
Water Use in Milking Barn





Water Use Inside Milking Barn

Water Use Outside of Milking Barn



Idaho Department of Water Resources

WMIS

Water Management Information System



Quick Search:

[For assistance, email](#)[WMIS Info](#)

Search Method:

WMIS Number ☐

WMIS Number

101307

Search

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Data Summary

You are viewing 101307

Report Year	Alternate	FM	PCC	Time Clock
2014				
2012		21.30		
2011				
2010		0.00		
2009		69.40		
2008		2.37		
2007		0.00		
2006		7.12		
2004		62.67		
2003		57.43		
2002		39.86		
2001				
2000				
1999		71.00		
1998		84.20		
1997		0.00		
1996		71.00		
1995		0.00		

Uncertain of Data
 meter installed during year
 meter Broken
 IDWR Audit
 meter installed during year
 Broken meter
 Erroneous measurement
 IDWR Audit
 IDWR Audit
 meter installed during year
 No Meter?
 No Meter!
 No Meter!

Vierstra 47-8363

DAIRIES: WATER USE WORKSHEET

REQUIRED DAIRY DATA	
NUMBER OF MILKING CATTLE	1200
NUMBER OF DRY CATTLE	700
NUMBER OF REPLACEMENT CATTLE: 0-2 MONTHS	0
3-4 MONTHS	0
5-8 MONTHS	0
9-12 MONTHS	0
13-16 MONTHS	0
16-24 MONTHS	0
ENTER 1 FOR MANUAL COW WASHING, 2 FOR AUTOMATIC, OR 3 IF	
SPRINKLERS ARE USED TO FLUSH HOLDING PEN AND WASH COWS	2
IF SPRINKLERS ARE USED: NUMBER OF SPRINKLERS IN HOLDING PEN	
NOZZLE DISCHARGE (USE 5.0 GPM IF UNKNOWN)	
OPERATION TIME OF SPRINKLERS (MIN/DAY)	
NUMBER OF MILKINGS PER DAY	3
AVG. LBS. OF MILK PRODUCED PER DAY PER ANIMAL (IDAHO AVG IS 70 LBS)	74
HOURS PER DAY PUMP OPERATES FOR STOCKWATER USE	12.0
HOURS PER DAY PUMP OPERATES FOR COMMERCIAL USE	12.0
IS RECYCLED WATER USED TO FLUSH MILKHOUSE AND PARLOR FLOORS?	Y
IS RECYCLED WATER USED TO WASH COWS?	N
IS A PLATE COOLER USED?	N
IS RECYCLED WATER USED FOR PLATE COOLER? (IF NO PLATE COOLER, LEAVE BLANK)	
IF CORRAL MISTERS ARE USED: NUMBER OF MISTERS IN HOLDING PEN	
NOZZLE DISCHARGE (GPM)	
OPERATION TIME OF MISTERS (MIN/DAY)	
DAYS PER YEAR MISTERS ARE USED	

CALCULATIONS	
DIVERSION RATE (CFS):	
STOCKWATER	
MILKING CATTLE (BASED ON MILK PRODUCTION)	0.13
DRY CATTLE @ 17.0 GPD/HD	0.04
REPLACEMENT CATTLE	0.00
TOTAL	0.16
COMMERCIAL	
TOTAL	0.05
TOTAL DIVERSION RATE	0.21
DIVERSION VOLUME (AFA):	
STOCKWATER	
MILKING CATTLE	40.8
DRY CATTLE	10.6
REPLACEMENT CATTLE	0.0
TOTAL	51.5
COMMERCIAL	
WASHING OF BULK TANK AND RELATED EQUIPMENT	0.6
BACKFLUSH	0.0
PARLOR/MILKHOUSE/HOLDING PEN CLEANUP	0.0
CATTLE WASHING BASED UPON METHOD OF WASHING	16.1
PLATE COOLER	0.0
CORRAL MISTERS	0.0
TOTAL	16.7
TOTAL DIVERSION VOLUME	68.2
CONSUMPTIVE USE VOLUME (AFA)(assuming 100% consumptive):	
STOCKWATER	51.5
COMMERCIAL	16.7
TOTAL CONSUMPTIVE USE	68.2

THEORETICAL FLOW ESTIMATION WORKSHEET

REQUIRED PUMP INFORMATION					
PUMP HORSEPOWER (HP)	PUMP 1	PUMP 2	PUMP 3	PUMP 4	PUMP 5
LIFT (FT)	10.00	5.00	0.00	0.00	0.00
DISCHARGE PRESSURE (PSI)	235	235	0	0	0
FRICTION LOSSES (FT)	40	40	0	0	0
HOURS PER DAY PUMP OPERATES	0.0	0.0	0.0	0.0	0.0
CALCULATIONS					
THEORETICAL FLOW RATE (CFS) *	0.19	0.09	0.00	0.00	0.00
DIVERSION VOLUME (AFA) **	45.4	25.5	0.0	0.0	0.0
* PUMP EFFICIENCY WAS ASSUMED TO BE 70%.					
** DIVERSION VOLUME IS THE ABSOLUTE MAXIMUM VOLUME BASED ON THE THEORETICAL FLOW RATE ASSUMING PUMP RUNS EVERY DAY OF THE YEAR.					

EVALUATION OF EQUIVALENT IRRIGATED ACREAGE

IRRIGATION RIGHT (BEFORE CHANGE)	
DIVERSION RATE	CFS
ACRES OF IRRIGATION	ACRES
DIVERSION VOLUME	AC-FT/AC
CONSUMPTIVE USE VOLUME	AC-FT/AC
IRRIGATION IS BEING CONVERTED FOR WHICH PORTION OF THE DAIRY OPERATION - STOCKWATER (S), COMMERCIAL (C), OR BOTH (B)?	
CALCULATIONS	
IRRIGATION DIVERSION RATE PER ACRE	10/17/01 CFS/AC
REDUCTION OF IRRIGATION BASED ON DIVERSION RATE	0.0 ACRES
REDUCTION OF IRRIGATION BASED ON DIVERSION VOLUME	0.0 ACRES
REDUCTION OF IRRIGATION BASED ON CONSUMPTIVE USE	0.0 ACRES

LD03

No. 03

LOG NAME:MIKEV

START :04-08 16:05

END :04-08 16:25

INTERVAL:00:01:00

4/8/2015 16:10

+2.105E+0 ft/s

+5.049E+1 gal/m

+TOTAL 0000254 gal

NORMAL

4/8/2015 16:16

+3.646E+0 ft/s

+8.744E+1 gal/m

+TOTAL 0000597 gal

NORMAL

4/8/2015 16:05

+2.313E+0 ft/s

+5.548E+1 gal/m

+TOTAL 0000000 gal

NORMAL

4/8/2015 16:11

+2.069E+0 ft/s

+4.962E+1 gal/m

+TOTAL 0000305 gal

NORMAL

4/8/2015 16:17

+5.250E+0 ft/s

+1.259E+2 gal/m

+TOTAL 0000715 gal

NORMAL

4/8/2015 16:06

+2.169E+0 ft/s

+5.204E+1 gal/m

+TOTAL 0000052 gal

NORMAL

4/8/2015 16:12

+2.102E+0 ft/s

+5.041E+1 gal/m

+TOTAL 0000354 gal

NORMAL

4/8/2015 16:18

+5.289E+0 ft/s

+1.268E+2 gal/m

+TOTAL 0000842 gal

NORMAL

4/8/2015 16:07

+2.091E+0 ft/s

+5.015E+1 gal/m

+TOTAL 0000104 gal

NORMAL

4/8/2015 16:13

+2.184E+0 ft/s

+5.239E+1 gal/m

+TOTAL 0000407 gal

NORMAL

4/8/2015 16:19

+5.186E+0 ft/s

+1.243E+2 gal/m

+TOTAL 0000969 gal

NORMAL

4/8/2015 16:08

+2.087E+0 ft/s

+5.005E+1 gal/m

+TOTAL 0000154 gal

NORMAL

4/8/2015 16:14

+2.174E+0 ft/s

+5.215E+1 gal/m

+TOTAL 0000460 gal

NORMAL

4/8/2015 16:20

+3.889E+0 ft/s

+9.328E+1 gal/m

+TOTAL 0001070 gal

NORMAL

4/8/2015 16:09

+2.050E+0 ft/s

+4.918E+1 gal/m

+TOTAL 0000204 gal

NORMAL

4/8/2015 16:15

+2.223E+0 ft/s

+5.333E+1 gal/m

+TOTAL 0000513 gal

NORMAL

4/8/2015 16:21

+2.380E+0 ft/s

+5.710E+1 gal/m

+TOTAL 0001155 gal

NORMAL

4/8/2015 16:22
+2.318E+0 ft/s
+5.560E+1 gal/m
+TOTAL 0001215 gal
NORMAL

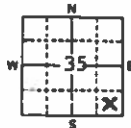
4/8/2015 16:23
+4.293E+0 ft/s
+1.029E+2 gal/m
+TOTAL 0001286 gal
NORMAL

4/8/2015 16:24
+4.500E+0 ft/s
+1.079E+2 gal/m
+TOTAL 0001392 gal
NORMAL

4/8/2015 16:25
+4.558E+0 ft/s
+1.093E+2 gal/m
+TOTAL 0001500 gal
NORMAL

Flowmeter Test 4/8/2015
Highest flow measured was 126.8 gpm or 0.28 cfs

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUSE TYPEWRITER OR
BALLPOINT PENState law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>Mike & Susan Vierstra</u> Address <u>3531-B N 3000 E Twin Falls, ID 83301</u> Drilling Permit No. <u>47-92-S-073</u> Water Right Permit No. _____		7. WATER LEVEL Static water level <u>235</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ Describe artesian or temperature zones below.																																																																																																																																															
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)		8. WELL TEST DATA ☐ Pump ☐ Bailor ☐ Air ☐ Other _____ <table border="1"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		Discharge G.P.M.	Pumping Level	Hours Pumped																																																																																																																																											
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3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)		9. LITHOLOGIC LOG 83818 <table border="1"><thead><tr><th rowspan="2">Bore Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>8"</td><td>0</td><td>6</td><td>Topsoil</td><td></td><td>x</td></tr><tr><td></td><td>6</td><td>56</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>56</td><td>62</td><td>Cinders (no circulation)</td><td></td><td>x</td></tr><tr><td></td><td>62</td><td>70</td><td>Broken lava</td><td></td><td>x</td></tr><tr><td></td><td>70</td><td>105</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>105</td><td>112</td><td>Cinders & clay</td><td></td><td>x</td></tr><tr><td></td><td>112</td><td>150</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>150</td><td>160</td><td>Broken lava</td><td></td><td>x</td></tr><tr><td></td><td>160</td><td>175</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>175</td><td>196</td><td>Cinders & Clay</td><td></td><td>x</td></tr><tr><td></td><td>196</td><td>204</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>204</td><td>210</td><td>Cinders & clay</td><td></td><td>x</td></tr><tr><td></td><td>210</td><td>236</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>236</td><td>252</td><td>Cinders & gravel</td><td>x</td><td></td></tr><tr><td></td><td>252</td><td>255</td><td>Lava</td><td></td><td>x</td></tr><tr><td>6"</td><td>255</td><td>265</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>265</td><td>277</td><td>Cinders</td><td>x</td><td></td></tr><tr><td></td><td>277</td><td>285</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>285</td><td>295</td><td>Cinders</td><td>x</td><td></td></tr><tr><td></td><td>295</td><td>340</td><td>Lava</td><td></td><td>x</td></tr><tr><td></td><td>340</td><td>348</td><td>Cinders & water talc</td><td>x</td><td></td></tr><tr><td></td><td>348</td><td>360</td><td>Lava</td><td></td><td>x</td></tr></tbody></table>		Bore Diam.	Depth		Material	Water		From	To	Yes	No	8"	0	6	Topsoil		x		6	56	Lava		x		56	62	Cinders (no circulation)		x		62	70	Broken lava		x		70	105	Lava		x		105	112	Cinders & clay		x		112	150	Lava		x		150	160	Broken lava		x		160	175	Lava		x		175	196	Cinders & Clay		x		196	204	Lava		x		204	210	Cinders & clay		x		210	236	Lava		x		236	252	Cinders & gravel	x			252	255	Lava		x	6"	255	265	Lava		x		265	277	Cinders	x			277	285	Lava		x		285	295	Cinders	x			295	340	Lava		x		340	348	Cinders & water talc	x			348	360	Lava		x
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	204	210	Cinders & clay		x																																																																																																																																												
	210	236	Lava		x																																																																																																																																												
	236	252	Cinders & gravel	x																																																																																																																																													
	252	255	Lava		x																																																																																																																																												
6"	255	265	Lava		x																																																																																																																																												
	265	277	Cinders	x																																																																																																																																													
	277	285	Lava		x																																																																																																																																												
	285	295	Cinders	x																																																																																																																																													
	295	340	Lava		x																																																																																																																																												
	340	348	Cinders & water talc	x																																																																																																																																													
	348	360	Lava		x																																																																																																																																												
4. METHOD DRILLED ☒ Rotary ☐ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)		10. Work started <u>6-12-92</u> finished <u>6-12-92</u>																																																																																																																																															
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>.250 inches</td><td>6-5/8 inches</td><td>1 feet</td><td>256 feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation? _____ inches by _____ inches <table border="1"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> Well screen installed? ☐ Yes ☒ No Manufacturer _____ Type _____ Top Packer or Headpipe _____ Bottom of Tailpipe _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>256'</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☐ Overbore to seal depth ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port _____ Well cap _____		Thickness	Diameter	From	To	.250 inches	6-5/8 inches	1 feet	256 feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	11. DRILLER'S CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>Elsing Drilling</u> Firm No. <u>31</u> P.O. Box <u>919</u> Address <u>Twin Falls, ID 83301</u> Date <u>6-24-92</u> Signed by Drilling Supervisor <u>[Signature]</u> and (Operator) <u>[Signature]</u> (If different than the Drilling Supervisor)																																																																																																																			
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6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Twin Falls</u> N ☐ E ☒ SE 1/4 SE 1/4 Sec. <u>35</u> , T. <u>10</u> S. <u>8</u> R. <u>16</u> W. ☐																																																																																																																																																	

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

1. DRILLING PERMIT NO. 47-96-S-0011 - 000
Other IDWR No. 47-08363

2. OWNER:

2. OWNER: Mike Vierstra
Name 2588 East 3500 North
Address Twin Falls State ID Zip 83301
City

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.


 Twp. 10 North ☐ or South ☒
 Rge. 16 East ☒ or West ☐
 Sec. 35 1/4 SE 1/4 SE 1/4
 Gov't Lot _____ County Twin Falls

Address of Well Site 2588 E 3500 N City Twin Falls
(Give at least name of road - Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Stock

5. TYPE OF WORK

☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Backs or Pounds	
Bentonite	0	18	8 S	Poured
Overbore to seal depth				

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____
Was drive shoe seal tested? Y ☐ N ☒ How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Gaging	liner	Welded	Threaded
8"	+2	18	.250	Steel	☒	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____

☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	User
					1037	995	☐
							☐
							☐
							☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

_____ 235 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or
control devices:

11. WELL TESTS:

☐ Pump ☐ Bailer ☐ Water Resource ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments:_____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12"	0	6	Topsoil		X
	6	18	Gray basalt		X
8"	18	58	Gray basalt		X
	58	72	Cinders		X
	72	139	Gray basalt		X
	139	145	Brown cinders		X
	145	168	Gray basalt		X
	168	172	Broken basalt		X
	172	238	Fractured basalt		X
	238	251	Cinders	X	
	251	268	Fractured basalt	X	
	268	275	Brown ash		X
	275	329	Fractured basalt		X
	329	334	Fractured basalt, water talc	X	
	334	338	Fractured basalt	X	
	338	341	Brown cinders	X	
	341	346	Brown basalt		X
	346	411	Fractured gray basalt	X	
	411	432	Brown basalt		X
	432	441	Fractured gray basalt	X	
	441	486	Brown basalt		X
	486	501	Fractured gray basalt	X	
	501	508	Brown ash & cinders	X	
	508	515	Fractured gray basalt, water talc	X	
	515	568	Gray basalt		X
	568	576	Broken basalt	X	
	576	606	Gray basalt		X
	606	611	Cinders	X	
	611	636	Gray basalt		X
	636	644	Red ash		X
	644	648	Brown cinders	X	
			Cont. on next page		

Cont. on next page

Completed Depth _____ (Measurable)
Date: Started _____ Completed _____

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name _____ Firm No. _____

Firm Official _____ Date _____

and

Supervisor or Operator _____ Date _____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUse Typewriter
or
Ball Point Pen

093212

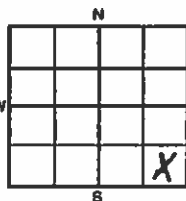
pg 2 of 2

1. DRILLING PERMIT NO. 47-96-S-0011-000
Other IDWR No. 47-08363

2. OWNER:

Name Mike Vierstra
Address 2588 East 3500 North
City Twin Falls State ID Zip 83301

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.Twp. 10 North ☐ or South ☒
Rge. 16 East ☒ or West ☐
Sec. 35 1/4 SE 1/4 SE 1/4
Gov't Lot _____ County Twin Falls

Address of Well Site _____

(Give at least name of road - Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

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☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK

☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

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7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT Sacks or Pounds	METHOD
Material	From	To		

Was drive shoe used? ☐ Y ☐ N Shoe Depth(s) _____
Was drive shoe seal tested? Y ☐ N ☐ How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

_____ ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or
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11. WELL TESTS:

☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
			(CONT.)		
8"	648	651	Brown ash		X
	651	683	Brown sandstone	X	
	683	690	Gray basalt		X

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at
the time the rig was removed.Firm Name Elsing Drilling Firm No. 31Firm Official Donald Elsing Date 2-28-96

and _____

Supervisor or Operator Craig Egan Date 2-28-96

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES