

RECEIVED

JUL 31 2009

DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

Permit No. 63-11848

1. Owner: Boise Packaging and Newsprint, LLC Phone No.: 208-442-4148

Current Address: 1808 E. Chisholm Dr., Nampa, ID 83687

2. Accompanied by: Steve Schultz EXAM DATE: 6/1/2009

Address: 1808 E. Chisholm Dr., Nampa, ID 83687 Phone No. 208-442-4148

Relationship to Permit Holder: Plant Controller

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Pioneer Irrigation District Water

2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

[illegible]

2. Place(s) of Use:

Indicate Method of Determination 2006 Photo, Exam

[illegible]

Measurements: 10 zones, 167 total nozzles, maximum 37 nozzles/zone at 40 psi (system runs one zone at a time, 30 min/zone, once/day)

37 1/8th-inch nozzles @ 40 psi: 109.5 gpm

37 9/64th-inch nozzles @40 psi: 138.4 gpm

Average gpm: $109.5 + 138.4 = 247.9 / 2 = 124 \text{ gpm} = 0.28 \text{ cfs}$

E. NARRATIVE/REMARKS/COMMENTS

An 8-inch well equipped with a submersible pump provides supplemental ground water for 3.0 acres of landscape irrigation at the Boise Packaging and Newsprint plant site. Pump information could not be located primarily because permit holders were not the owners at the time the well was drilled. The system consists of a mixture of 1/8th-inch and 9/64th-inch nozzles that operate at approximately 40 psi based on the small size of the irrigation system. A standard nozzle discharge chart obtained from the University of Idaho and used by IDWR indicates that the system can operate at approximately 0.28 cfs. For comparison, a pumping capacity of 0.21 cfs was estimated using a theoretical calculation for a 5-hp pump (common for small irrigation systems). This information indicates that the system developed has sufficient capacity to irrigate three acres at the permitted flow rate and full volume.

Access to Pioneer Irrigation Districts water is a delivery box located inside the well house located next to the well.

Have conditions of permit approval been met? X yes no

F. FLOW CALCULATIONS

Y Additional Computation Sheets Attached
Attachment E: Nozzle Discharge Chart & Well Log

Average operating capacity based on sprinkler nozzles: 0.28 cfs

Average operating capacity based on theoretical (assuming dynamic head is 10 feet below static water level recorded on the associated well log and pump is a 5-hp submersible): $\frac{8.8 \times 5\text{-hp} \times 7}{30' + (50 \text{ psi} \times 2.31)} = \frac{30.8}{145.5} = 0.21 \text{ cfs}$

Limit flow rate to 0.09 cfs per permit

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3 \times 4.5 = 13.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.09 \times 260 \times 1.9835 = 46.4 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 13.5 \text{ afa}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

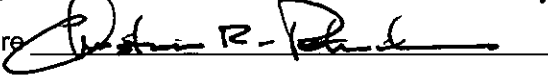
Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Irrigation	3/1	11/15	0.09	13.5
Totals			0.09 cfs	13.5 afa

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

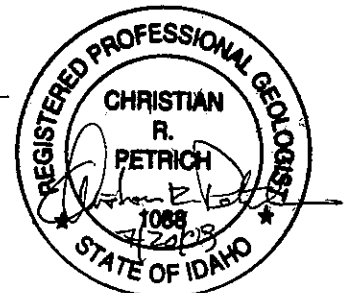
I. AUTHENTICATION

Field Examiner's Name CHRISTIAN R. PETRICH Date 7/20/2009

Field Examiner's Signature 

Reviewer _____ Date _____

SEAL





ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

[Close](#)IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

5/16/2009

WATER RIGHT NO. 63-11848

Owner Type	Name and Address
Current Owner	BOISE PACKAGING AND NEWSPRINT LLC TONY STEENKOLK 1111 JEFFERSON ST STE 200 BOISE, ID 83799-0050 (208)384-7372
Attorney	BRUCE SMITH 225 N 9TH ST STE 420 BOISE, ID 83702
Original Owner	BOISE CASCADE CORRUGATED CONTAINERS 1808 E CHISHOLM DR NAMPA, ID 83687 (208) 388-4184

Priority Date: 05/21/1992

Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
IRRIGATION	03/01	11/15	0.09 CFS	
Total Diversion			0.09 CFS	

Location of Point(s) of Diversion:

GROUND WATER|SWNW|Sec. 14|Township 03N|Range 02W|CANYON County

Place(s) of use:

Place of Use Legal Description: IRRIGATION CANYON County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
03N	02W	14		SWNW3	3									

Total Acres: 3

Conditions of Approval:

- | | |
|-------|--|
| 1.26A | Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control. |
| 2.046 | Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department. |
| 3.004 | This right does not grant any right-of-way or easement across the land of another. |
| 4.01M | After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to use power records to determine the amount of water diverted and shall annually report the information to the Department. |
| 5.R69 | This right when combined with all other rights shall provide no more than 0.03 cfs per acre nor more than 4.5 afa per acre at the field headgate for irrigation of the lands above. |
| 6.121 | The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit. |

Dates:

Proof Due Date: 05/01/2011

Proof Made Date:

Approved Date: 05/01/2008

Moratorium Expiration Date: 12/31/1994

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Application Received Date: 05/21/1992

Protest Deadline Date:

Number of Protests: 0

Field Exam Date:

Date Sent to State Off:

Date Received at State Off:

Other Information:

State or Federal:

Owner Name Connector:

Water District Number:

Generic Max Rate per Acre: 0.03

Generic Max Volume per Acre: 4.5

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY

Amt. of Fee \$: _____
Receipt No. _____
Receipt By: _____
Date Received: _____

The Idaho Department of Water

Resources considers this form a statement by the permit holder(s) that development of a water right has been completed and that water has been applied to beneficial use to the extent described below. This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner. Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, please contact any Department office or visit the Department's website at: www.idwr.idaho.gov for an Assignment of Permit form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No. 63-11848 Telephone No. 208-384-0050

2. Name of Permit Holder(s): Boise Packaging and Newsprint, LLC

3. Mailing Address: 1111 Jefferson St., Ste 200. City Boise

State ID Zip 83799 Email: _____

4. Source of Water: Ground Water If **GROUND WATER** (well), Date Drilled: mo. 09 / yr. 1992

Well Driller: Bill Doty Drilling Permit Number: 63-92-W-656

5. Extent of use(s) completed (as authorized by the water right permit):

Domestic (No. of households): _____ Stockwater (No. and type of stock): _____

Irrigation (No. of acres): 3 Other: _____

6. Total rate of diversion or storage volume for which proof is submitted: 0.09 cfs OR _____ acre-feet.

7. Compliance with a Measuring Device requirement and/or other Conditions of Permit: *(Refer to the approval conditions on your permit and respond accordingly.)*

Measuring Device: Is a measuring device required?
If yes, has the measuring device been installed?

Yes ☐ or No ☒
Yes ☐ or No ☐

Conditions of Permit: Does your permit require you to submit additional information in connection with your proof of beneficial use? (If yes, please list the conditions below and provide documents if necessary.)

Completed?

Yes ☐ or No ☐

Completed?

Yes ☐ or No ☐

8. Fee Enclosed: \$ _____ (See Fee Schedule on back of the instructions for filing proof of beneficial use. Proofs filed without an appropriate fee, will be considered incomplete.)

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: _____ Telephone Number: _____

Mailing Address: _____ City _____

State _____ Zip _____ Email: _____

10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of permit holder:

Stu Selva, Plant Controller
(include your title, if on behalf of company or organization)

Date: 06/29/09



ATTACHMENT B
NOZZLE CHART AND WELL LOG

30 / runs
30' / hand one section
AVERAGE ACCEPTABLE FOR ALL BRANDS

UNIVERSITY OF IDAHO — FACT SHEET Hydraulic Relationships and Performance, Soil and Water Relationships

NOZZLE DISCHARGE IN GALLONS PER MINUTE

HYDRAULIC RELATIONSHIPS

*** NOZZLE DIAMETER IN INCHES ***									PRESSURE: (P)*MAY BE IN PSI OR EQUIVALENT FEET OF WATER 1.0 psi = 2.31 feet
psi	3/32	1/8	9/64	5/32	11/64	3/16	13/64	7/64	
20	1.17	2.09	2.65	3.26	3.92	4.69	5.51	6.37	FLOW: (Q)*MAY BE IN CFS OR EQUIVALENT GAL. PER MIN. 1.0 cfs = 449 gpm
25	1.31	2.34	2.96	3.64	4.38	5.25	6.16	7.13	
30	1.44	2.56	3.26	4.01	4.83	5.75	6.80	7.86	POWER: MAY BE IN KILLOWATTS (KW), WATER HORSEPOWER (WHP), and, ELECT. HORSEPOWER (EHP) 1.0 KW = 1.34 EHP 1.0 EHP= 0.746 KW WHP = Q(gpm) X P(ft) / 3960 KW = 1.732 X V X A X PF/1000
35	1.55	2.77	3.50	4.31	5.18	6.21	7.30	8.43	
40	1.66	2.96	3.74	4.61	5.54	6.64	7.80	9.02	EFFICIENCY: (EFF) MAY BE WATER TO WIRE ... WHP / EHP FLUID TO SHAFT .. WHP / SHP
45	1.76	3.13	3.99	4.91	5.91	7.03	8.30	9.60	
50	1.85	3.30	4.18	5.15	6.19	7.41	8.71	10.10	VOLUME: ACRE FT. OR ACRE IN. 1.0 cfs = 1.98 AF / DAY 1.0 AF = 12.0 AI
55	1.94	3.46	4.37	5.39	6.48	7.77	9.12	10.50	
60	2.03	3.62	4.50	5.65	6.80	8.12	9.56	11.05	
65	2.11	3.77	4.76	5.87	7.06	8.45	9.92	11.45	
70	2.19	3.91	4.96	6.10	7.34	8.78	10.32	11.95	
75	2.27	4.05	5.12	6.30	7.58	9.08	10.66	12.32	
80	2.35	4.18	5.29	6.52	7.84	9.39	11.02	12.74	
85	2.42	4.31	5.45	6.71	8.07	9.67	11.35	13.11	
90	2.49	4.43	5.61	6.91	8.31	9.95	11.69	13.51	
95	2.56	4.56	5.76	7.09	8.53	10.20	11.99	13.86	
100	2.63	4.67	5.91	7.29	8.76	10.50	12.32	14.23	
$Q(gpm) = 30.0 \times D(in.)^2 \times P(psi)^{0.5}$									

h = AVERAGE APPLICATION RATE IN INCHES PER HOUR

spacing	2	3	4	5	6	7	8	9	10	11	12	spacing
feet	*	*	*	gallons per minute per sprinkler							*	feet
20x20	.48	0.72	0.96	1.20	1.44	1.70	1.93	2.16	2.40	2.64	x.x	20x20
20x30	.32	0.48	0.64	0.80	0.96	1.12	1.28	1.43	1.60	1.76	1.9	20x30
20x40	.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08	1.20	1.32	1.4	20x40
30x30	.21	0.32	0.43	0.54	0.64	0.75	0.88	0.96	1.07	1.17	1.2	30x30
30x40	.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80	0.88	0.9	30x40
30x50	.13	0.19	0.25	0.32	0.38	0.45	0.51	0.58	0.64	0.70	0.7	30x50
40x40	.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54	0.60	0.66	0.7	40x40
40x50	.10	0.14	0.19	0.24	0.29	0.34	0.38	0.43	0.48	0.53	0.5	40x50
40x60	.xx	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	0.44	0.4	40x60

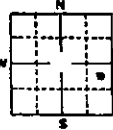
LONG-TERM BASIC SOIL INFILTRATION RATES
AGGREGATED-STRUCTURED-BARE-OPEN SOIL & POOR SOIL
Course Sand. (*0.9) > 0.75 - 1.00"/hr. | 0.35"/hr. |
Fine Sands. (*1.2) > 0.50 - 0.75"/hr. | 0.25"/hr. |
Fine S.Loam. (*1.9) > 0.35 - 0.50"/hr. | 0.20"/hr. |
Silt Loam. (*2.3) > 0.25 - 0.40"/hr. | 0.13"/hr. |
Clay Loam. (*2.2) > 0.10 - 0.30"/hr. | 0.07"/hr. |
For 10 - minute SHORT-TERM rate, multiply by 6
(*X.X) = Aprox. Water Holding Capacity (in./ft.)

PEAK APPLICATION RATE FOR PIVOT
r; R = rad. of sprinkler and pivo
h = 122.5 X Q(pvt. gpm) / (r X R)

EXPECTED IRRIGATION EFFICIENCIE
Sprinkler 50 to 70
Drop Sprays 60 to 80
Level Boarder 50 to 80
Furrow 20 to 50

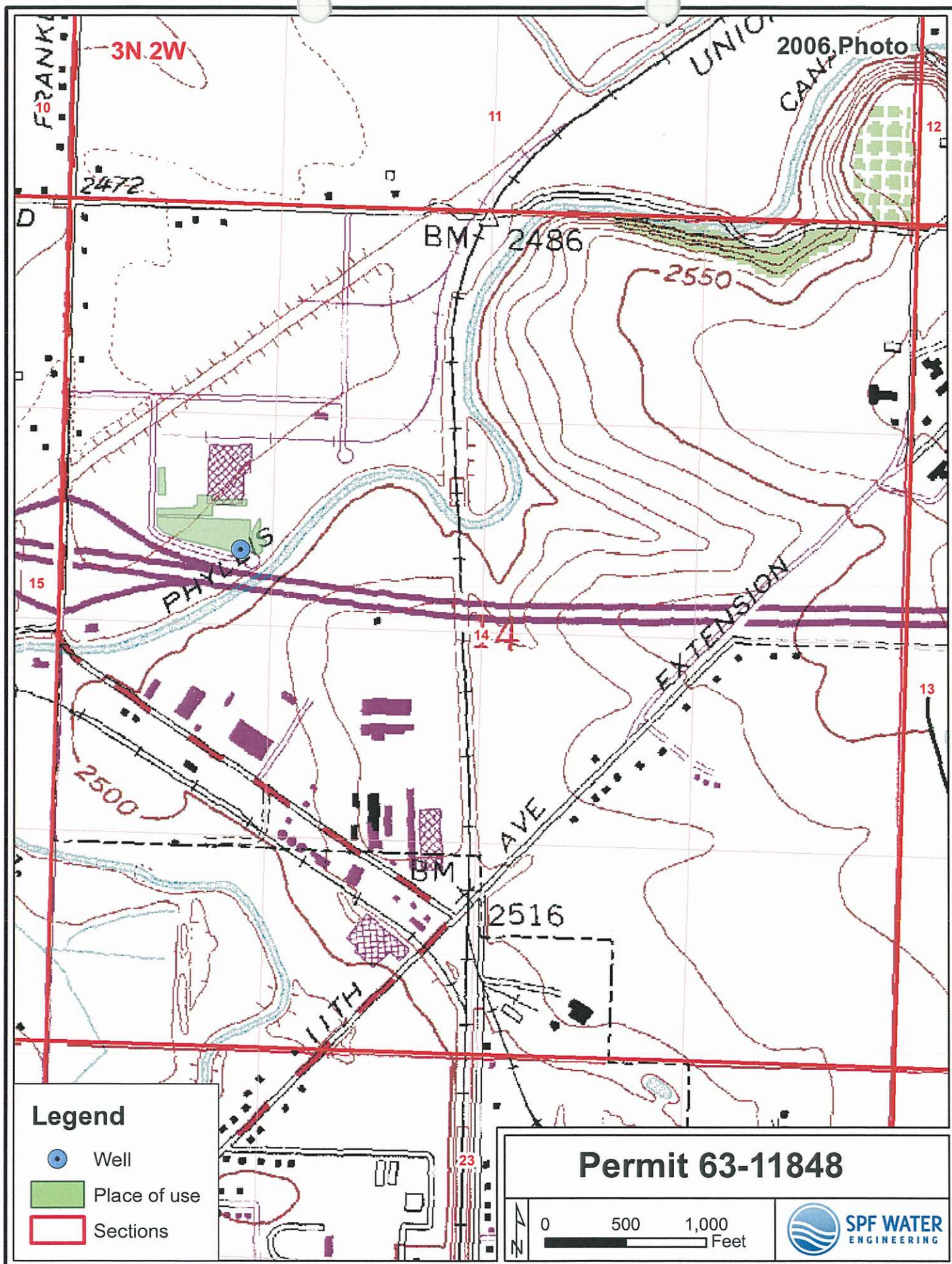
WELL DRILLER'S REPORT

State 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>BOISE CASCADE</u> Address <u>1808 EAST CHISHOLM DR. NAMPA, ID 83687</u> Drilling Permit No. <u>63-92-W-656</u> Water Right Permit No. <u>M63-11848</u>	7. WATER LEVEL Static water level <u>20</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 _____																																																		
3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> </thead> <tbody> <tr> <td align="center"><u>150</u></td> <td align="center"><u>90'</u></td> <td align="center"><u>1.5 HRS.</u></td> </tr> <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	<u>150</u>	<u>90'</u>	<u>1.5 HRS.</u>																																												
Discharge G.P.M.	Pumping Level	Hours Pumped																																																	
<u>150</u>	<u>90'</u>	<u>1.5 HRS.</u>																																																	
4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)	9. LITHOLOGIC LOG <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Bore Diam.</th> <th>Depth From To</th> <th>Material</th> <th colspan="2">Water</th> </tr> <tr> <th></th> <th></th> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td><u>10</u></td><td><u>0</u> <u>2</u></td><td><u>TOP SOIL</u></td><td></td><td align="center"><u>X</u></td></tr> <tr><td><u>10</u></td><td><u>2</u> <u>6</u></td><td><u>CLAY</u></td><td></td><td align="center"><u>X</u></td></tr> <tr><td><u>10</u></td><td><u>6</u> <u>15</u></td><td><u>CLAY w/ SAND</u></td><td></td><td align="center"><u>X</u></td></tr> <tr><td><u>10</u></td><td><u>15</u> <u>20</u></td><td><u>SAND</u></td><td align="center"><u>X</u></td><td></td></tr> <tr><td><u>8</u></td><td><u>20</u> <u>55</u></td><td><u>SAND & GRAVEL</u></td><td align="center"><u>X</u></td><td></td></tr> <tr><td><u>8</u></td><td><u>55</u> <u>60</u></td><td><u>CLAY</u></td><td></td><td align="center"><u>X</u></td></tr> <tr><td><u>8</u></td><td><u>60</u> <u>88</u></td><td><u>SAND</u></td><td align="center"><u>X</u></td><td></td></tr> <tr><td><u>8</u></td><td><u>88</u> <u>90</u></td><td><u>CLAY</u></td><td></td><td align="center"><u>X</u></td></tr> <!-- Empty rows omitted --> </tbody> </table>	Bore Diam.	Depth From To	Material	Water					Yes	No	<u>10</u>	<u>0</u> <u>2</u>	<u>TOP SOIL</u>		<u>X</u>	<u>10</u>	<u>2</u> <u>6</u>	<u>CLAY</u>		<u>X</u>	<u>10</u>	<u>6</u> <u>15</u>	<u>CLAY w/ SAND</u>		<u>X</u>	<u>10</u>	<u>15</u> <u>20</u>	<u>SAND</u>	<u>X</u>		<u>8</u>	<u>20</u> <u>55</u>	<u>SAND & GRAVEL</u>	<u>X</u>		<u>8</u>	<u>55</u> <u>60</u>	<u>CLAY</u>		<u>X</u>	<u>8</u>	<u>60</u> <u>88</u>	<u>SAND</u>	<u>X</u>		<u>8</u>	<u>88</u> <u>90</u>	<u>CLAY</u>		<u>X</u>
Bore Diam.	Depth From To	Material	Water																																																
			Yes	No																																															
<u>10</u>	<u>0</u> <u>2</u>	<u>TOP SOIL</u>		<u>X</u>																																															
<u>10</u>	<u>2</u> <u>6</u>	<u>CLAY</u>		<u>X</u>																																															
<u>10</u>	<u>6</u> <u>15</u>	<u>CLAY w/ SAND</u>		<u>X</u>																																															
<u>10</u>	<u>15</u> <u>20</u>	<u>SAND</u>	<u>X</u>																																																
<u>8</u>	<u>20</u> <u>55</u>	<u>SAND & GRAVEL</u>	<u>X</u>																																																
<u>8</u>	<u>55</u> <u>60</u>	<u>CLAY</u>		<u>X</u>																																															
<u>8</u>	<u>60</u> <u>88</u>	<u>SAND</u>	<u>X</u>																																																
<u>8</u>	<u>88</u> <u>90</u>	<u>CLAY</u>		<u>X</u>																																															
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ Thickness Diameter From To <u>.250</u> inches <u>8</u> inches + <u>3</u> feet <u>71</u> feet <u>.250</u> inches <u>6</u> inches <u>63</u> feet <u>73</u> feet <u>.250</u> inches <u>6</u> inches <u>88</u> feet <u>100</u> feet 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 Number From To _____ perforations _____ foot _____ foot _____ perforations _____ foot _____ foot _____ perforations _____ foot _____ foot Well screen installed? ☒ Yes ☐ No Manufacturer <u>HUSTON</u> Type <u>304 SS.</u> Top Packer or Headpipe <u>67'</u> Bottom of Tailpipe <u>90</u> Diameter <u>6</u> Slot size <u>.016</u> Set from <u>73</u> feet to <u>88</u> feet Diameter _____ Slot size _____ Set from _____ foot to _____ foot Gravel packed? ☐ Yes ☒ No Size of gravel _____ Placed from _____ foot to _____ foot Surface seal depth <u>20</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☐ Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port _____	RECEIVED SEP 17 1992 Department of Water Resources																																																		
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. <u>AUG 09 1994</u> County <u>CANYON</u> Address of Well Site _____ (give at least name of road) T. <u>3N</u> N ☒ S ☐ R. <u>E</u> E ☐ W ☒ NE <u>¼</u> SE <u>¼</u> Sec. <u>14</u> , R. <u>2W</u>	10. Work started <u>9-9-92</u> finished <u>9-11-92</u> 11. DRILLER'S CERTIFICATION I/we certify that all minimum well construction standards were complied with at the time the rig was removed. BILL DOTY DRILLING Firm Name <u>CO., INC.</u> Firm No. <u>42</u> Address <u>106 CALLOWAY CADDEN, ID 83605</u> Date <u>9-14-92</u> Signed by Drilling Supervisor <u>[Signature]</u> and (Operator) <u>Todd Doty</u> (if different than the Drilling Supervisor)																																																		



ATTACHMENT C
TOPO MAP AND 2006 AERIAL PHOTO



3N 2W

2006 Photo

10

11

12

15

14

13

23

Legend

-  Well
-  Place of use
-  Sections

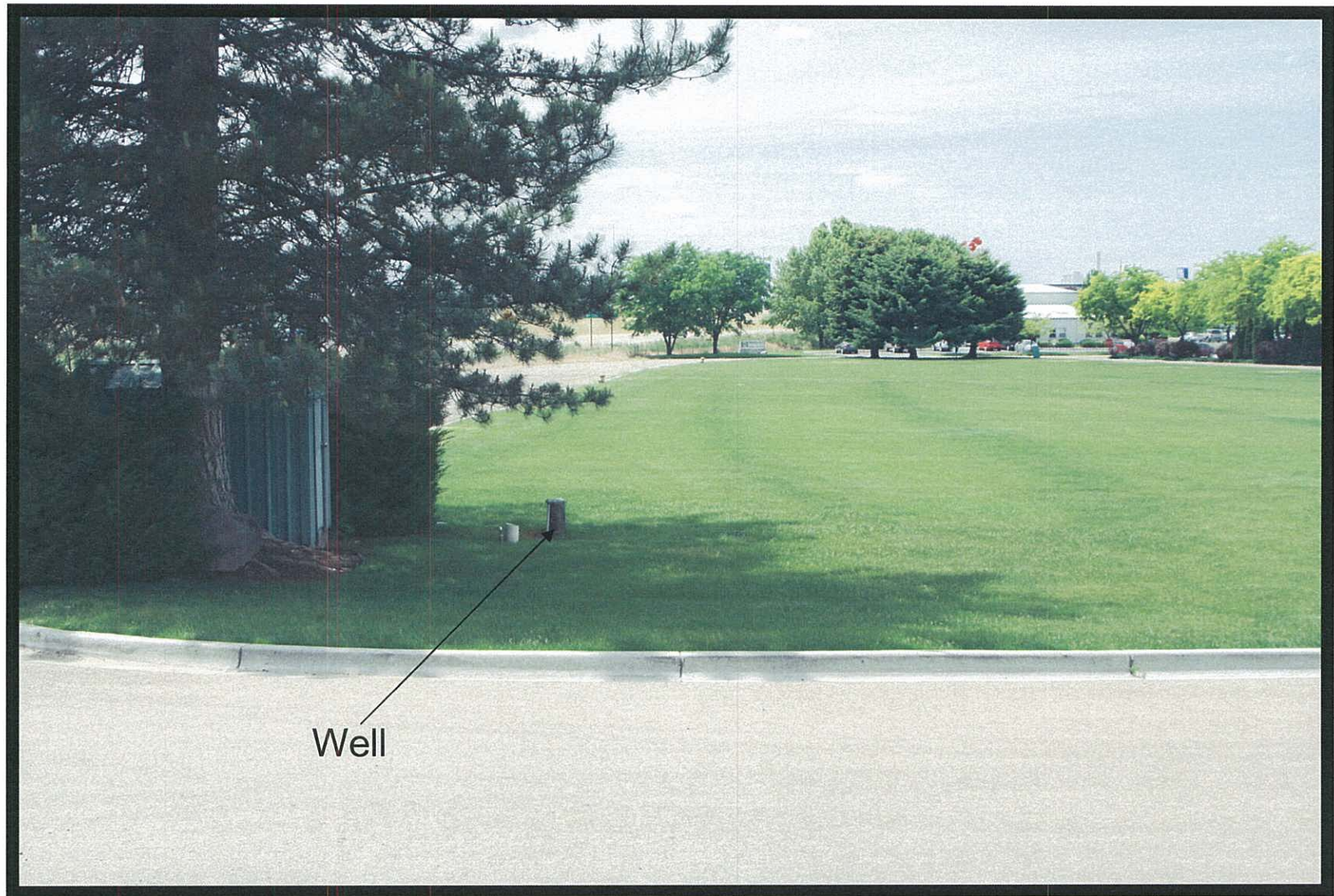
Permit 63-11848



0 500 1,000 Feet



ATTACHMENT D
PHOTOS



Well

Point of Diversion and Place of Use



8-inch Well and Well House



Pump Controlling Works



Place of Use



Place of Use



Place of Use



Place of Use



Place of Use



Place of Use



Place of Use



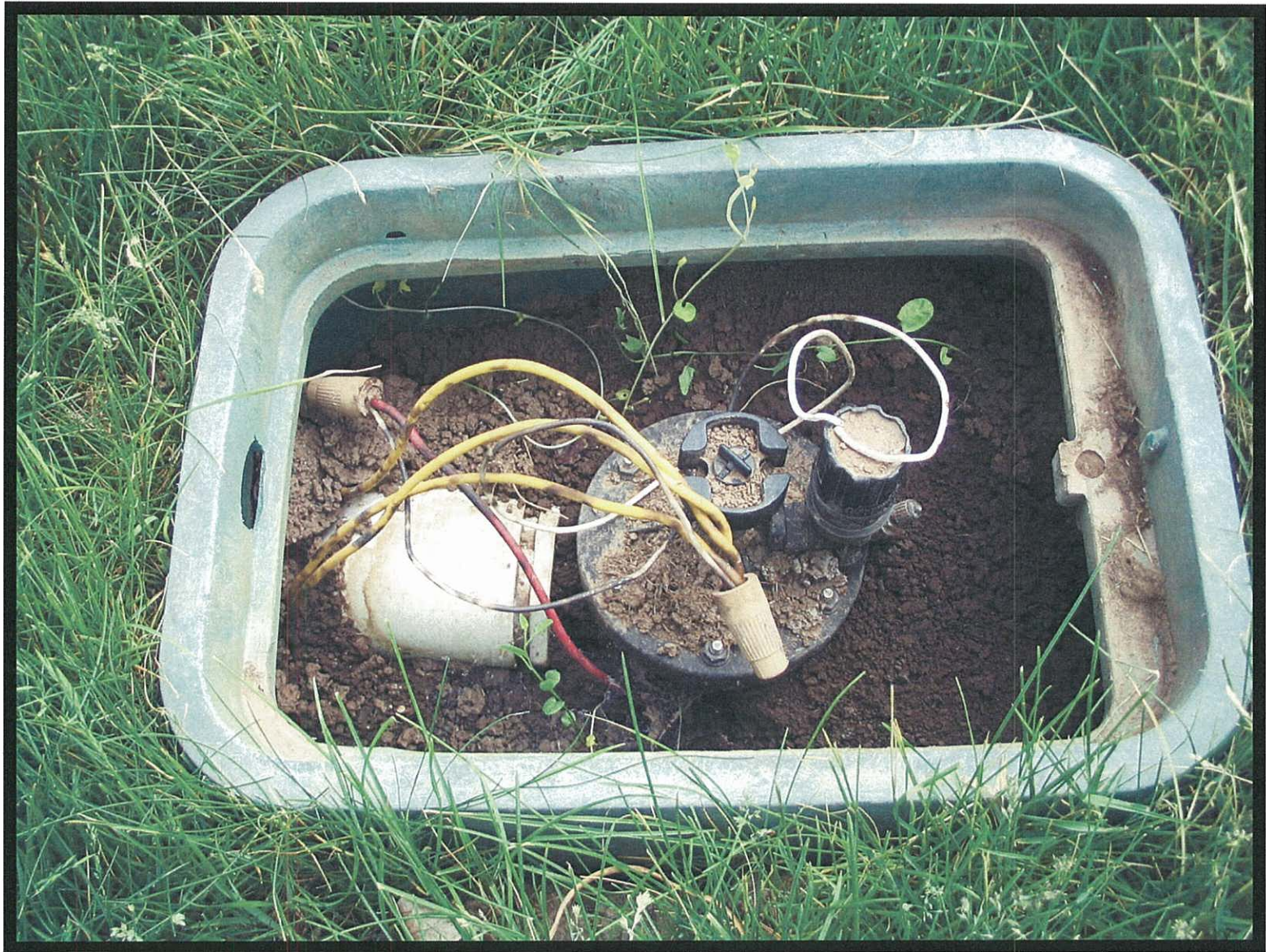
Place of Use



Place of Use



Place of Use



Sprinkler Controls



Sprinkler Nozzle