

MEMO

TO: 37-8553 DeChevrieux

FROM: Sandy Hemenway

DATE: 9/23/2010

On 1/8/1990, the Permit was approved for Domestic Use (1 home), and Irrigation for 3.0 acres at 0.03 cfs/acre "in connection with a Domestic Use." Proof of construction was to be submitted on or before 2/1/1992.

On 1/15/1992, a Request for Extension of Time was approved, extending the time to submit proof of beneficial use to 2/1/1995. Work described on the Request for Extension of Time, was that the well had been drilled and completed on 5/19/1990 (Well Drillers Report is attached to 7/16/2007 Field Exam located in file). A comment on the Request for Extension of Time, for why the permit holder was unable to complete the remainder of the work, was due to not being able to obtain an easement for Idaho Power Co. across the adjacent property.

On 9/22/2010, the original permit holder Robert Bloomfield was called at (208) 726-5381, and the business stated that Robert no longer worked there; has been gone for more than 10 years, and they have no new contact information. Lonnie Linderman was called at (509) 991-4681, but Lonnie stated he did not have any additional information (permit was assigned over to him by Bloomfield 5/14/2001).

On 9/22/2010, **Idaho Power Co. was contacted** at (800) 488-6151. Valerie (they are not permitted to give out their last name) stated that their records only go back as far as 1994, and they show service for 110 Logans Ln., Bellvue, ID 83313 (physical address for POU). Valerie stated that **they could have had service earlier than 1994, but they no longer have access to those records** (copy of phone Memo is in the file).

On 10/17/1994, the Proof of Beneficial Use, and \$50 fee (receipt # 5017474) was submitted. Proof was for Domestic (1-household), Irrigation (3-acres), and Horses (which falls under Domestic use since they were not listed separately as Stockwater Use on the approved Permit). **The total rate for which the Proof of Beneficial Use was submitted was for 0.09 cfs.**

Irrigation POU Arc Map Imagery:

Checking the 2004 ArcMap Imagery, the trees are not visible yet, since they are seedlings, and are very small. In the 2006 Imagery, they are starting to become visible, and by the 2009 Imagery they are becoming more distinct. All of the trees are irrigated with 150 Hunter PCN Bubbler Nozzles located at each tree. All other irrigation is with Hunter 500 number 6 low angle pop-up nozzles (2.8 gpm/nozzle), an average of 16 nozzles per zone (10 zones), at 50 psi. Irrigation is for 3.0 acres. As the pine trees grow in size over time, satellite imagery begins to detect them. (Another example of trees not being detected as seedlings until they are larger in size is Water Right 63-4149, which is 1.0 acre irrigated, with 29 pine seedlings, gardens, and 12 fruit trees. With time, and growth of the trees, they finally show up on ArcMap. Also, due to poor soil, much like the golf course directly to the north, imagery shows grassed area as a lighter shade, which gives the illusion of not being irrigated, when it is known to be irrigated regularly).

An Affidavit:

Robert Bloomfield submitted a signed and notarized Affidavit dated 10/4/2005, which describes the system from 1990 till 2001. It describes irrigating 3 separately fenced pastures on this property and a tree farm. After selling their horses in June 1995, they leased the pastures to a local cattleman who continued to irrigate the 3 acres until it was sold to the Linderman's in 2001.

Capacity of the system:

(1) The Proof of Beneficial Use states a 5 Hp pump, system run at 40 psi, and with dynamic level of 80 feet. From this information, a theoretical would be: $[(8.8) \times 5.0 \text{ Hp} \times 0.7 \text{ eff}]/[80 + (2.31 \times 40\text{psi})] = 30.8/172.4 = 0.178 \text{ or } 0.18 \text{ cfs}$.

(2) The Well Driller's Report indicated a Well Test of 160 gpm (0.35 cfs) for 1 hour with a pumping level of 140 ft, and the depth of the well being 143 ft. This is a short time period for a low test, and with only 3 feet between the dynamic and the depth of the well, that could be a concern.

(3) During the 7/16/2007 Field Exam, a physical measurement was taken from one zone of 16 Hunter 500 pop-up Number 6 Low Angle Nozzles at 50 psi $(2.8 \text{ gpm} \times 16 = 44.8 \times 0.00223 = 0.0999 = 0.10 \text{ cfs})$.

Recommendation for Licensing, for the Capacity of the system: 0.10

cfs. This is due to such a discrepancy between the Theoretical and the Well Driller's Report, and no polysonic, or a pump curve for the well to confirm whether the rate should be higher or not.

Conditions/Remarks:

There are two items that were flagged on AdHoc for future queries, but the conditions were not added to the License, due to not being included on the approved Permit: **R05 Water District 37, and R55 Trust Area.**

Based on the additional information listed below, the following Diversion Rate (cfs), and Volume (af) are recommended:

Domestic includes shop, garage, house being built, and horses.

Irrigation includes yard/garden, landscaping and surrounding grounds, "in connection with domestic use."

Domestic: 0.04 cfs, 0.6 af.

Irrigation: 0.09 cfs, 10.5 af

Total Recommended: 0.09 cfs; 11.1 af

ADDITIONAL INFORMATION:

CFS

Irrigation: "In connection with domestic use," at 0.03 cfs X 3.0 acres = 0.09 cfs.

Domestic: 0.04 cfs (currently for the shop which is the temporary living quarters till the house is completed, garage, and horses).

Total cfs recommended 0.09 cfs, as approved on Permit.

Volume

Irrigation: $V_{ir} = 3.0 \text{ acres} \times 3.5 \text{ af/acre} = 10.5 \text{ afa}$. $V_{dr} = 0.09 \times 199 \times 1.9835 = 35.5$. $V = 10.5 \text{ afa}$.

Domestic: 0.60 af, since domestic external use is included in the irrigation component.

Total volume recommended 11.10 af.

Capacity of System

- (1) The 10/17/1994 Proof of Beneficial Use stated that the pump was a 5 Hp, 40 psi, and 80 ft dynamic lift. From this information the Theoretical would be $(8.8 \times 5 \times 0.7) / [80 + (2.31 \times 40\text{psi})] = 30.8 / 172.4 = 0.18 \text{ cfs}$.
- (2) Well Drillers Report shows 160 gpm or 0.35 cfs at 140 ft (143 ft deep well) for 1 hr., which is a short pumping period of time to determine the actual capacity of the well, with such a small difference between the depth of the well, and the pumping level.

- (3) A Physical Measurement using a Hunter low angle nozzle 13 degree trajectory nozzle number 6, at 50 psi, equals 2.8 gpm per nozzle. At the time of the 7/16/2007 field exam, 16 nozzles were running at the same time. $16 \times 2.8 \text{ gpm} = 44.8 \text{ gpm} \times 0.00223 = 0.0999 = \mathbf{0.10 \text{ cfs}}$. Nozzle information was obtained during the 9/20/2010 phone conversation with Mr. DeChevrieux (See Hunter Nozzle Data sheet in file).

Recommended Capacity of System: 0.10 cfs, since there is a large discrepancy between the Theoretical and the Well Drillers Report, and since no polysonic or pump curves were obtained to confirm if the capacity should be higher. When speaking with Mr. DeChevrieux on the phone, he approved of this determination.

POD Overlap

NONE

POU Overlap

NONE. Administrative Area information shows Fall Creek Sheep Co, and Baseline Canal Co. overlapping, but Mr. DeChevrieux stated in a phone conversation 9/20/2010 that he does not own any shares.

Ownership

Tax Lot information that was updated 7/31/2010, shows 23.0 acres owned by DeChevrieux.

System Description

8 inch casing, 2-(5 Hp) submersible variable pumps (one for the house, and one for irrigation---), 143 ft deep, static 60 feet, 2 inch discharge to 4 inch buried PVC reducing to 2 inch, then reducing to 1 1/2 inch and 1 inch PVC at different locations/zones. An average of 15 - 16 Hunter 500 number 6 low angle pop-up nozzles (2.8 gpm/nozzle) per zone, 10 zones, and 150 Hunter PCN Bubbler Nozzles (0.9 gallon/hour/ft) located where the trees are irrigated. Irrigation is for 3 acres. Domestic use is for the shop and garage currently, until the house is completed.

Well Permit Number

On AdHoc, each time the owners well permit number 37-89-S-104 was entered, and error message popped up (no matter how it was entered). For this reason, it is in the comments/remarks.

Domestic Use

The shop is currently the living quarters until the house is completed. The garage, and horses is also included in the domestic use. Since external use is included in the irrigation component, the diversion rate will remain at 0.04 cfs, but the annual volume will be 0.60 af.

Easement

The easement that is referenced in the Request for Extension of Time, is an easement for the power pole (for Idaho Power). The property where the POU/POD are located are owned by Mr. DeChevrieux.

Phone Conversation

On 9/20/2010, Mr. DeChevrieux was contacted by phone to obtain additional information on the irrigation system and well (See Memo in the file).

Season of Use

The approved Permit showed 4/1 thru 11/1, but for licensing was changed to meet current **IDWR standards of 4/15 thru 10/31**. No amendment to licensing is required for this change.

Supplemental Water

NONE. No shares, and no other water sources.

CONDITIONS NOT INCLUDED ON LICENSE, BUT FLAGGED ON ADHOC:

(1) Water District

Administrative Area information shows this water right falls into Water District 37. Condition R05 was not added at the time of Licensing, since this condition was not on the approved Permit. It was "flagged" though on AdHoc, to assist with future queries.

(2) Trust Area

Administrative Area shows this to be a Trust Area. Condition R55 was not added on the License, since no condition was included on the approved Permit. The "flag T" was added on AdHoc, to assist with future queries.

RECOMMENDATIONS FOR LICENSING:

Irrigation 4/15 – 10/31	0.09 cfs	10.50 af	3.0 acres
Domestic 1/1 – 12/31	0.04 cfs	0.60 af	
Totals:	0.09 cfs	11.10 af	

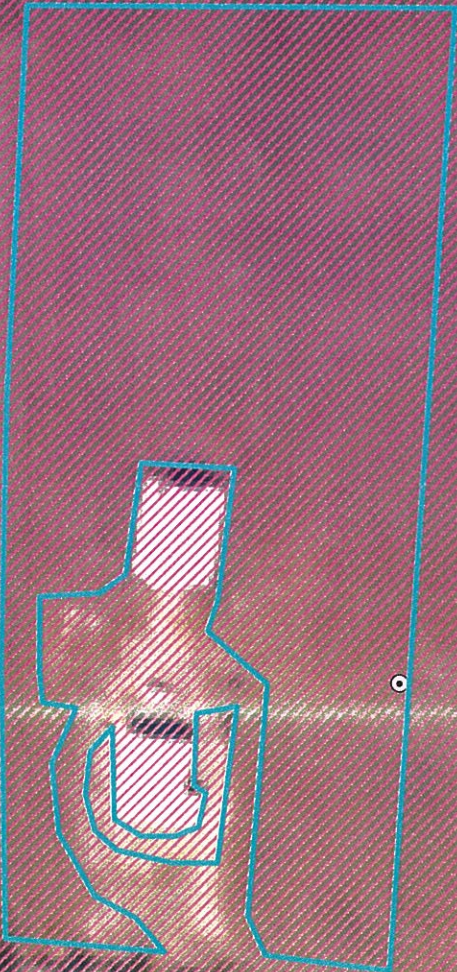
Check Administrative Area Results

Click On Item For More Information

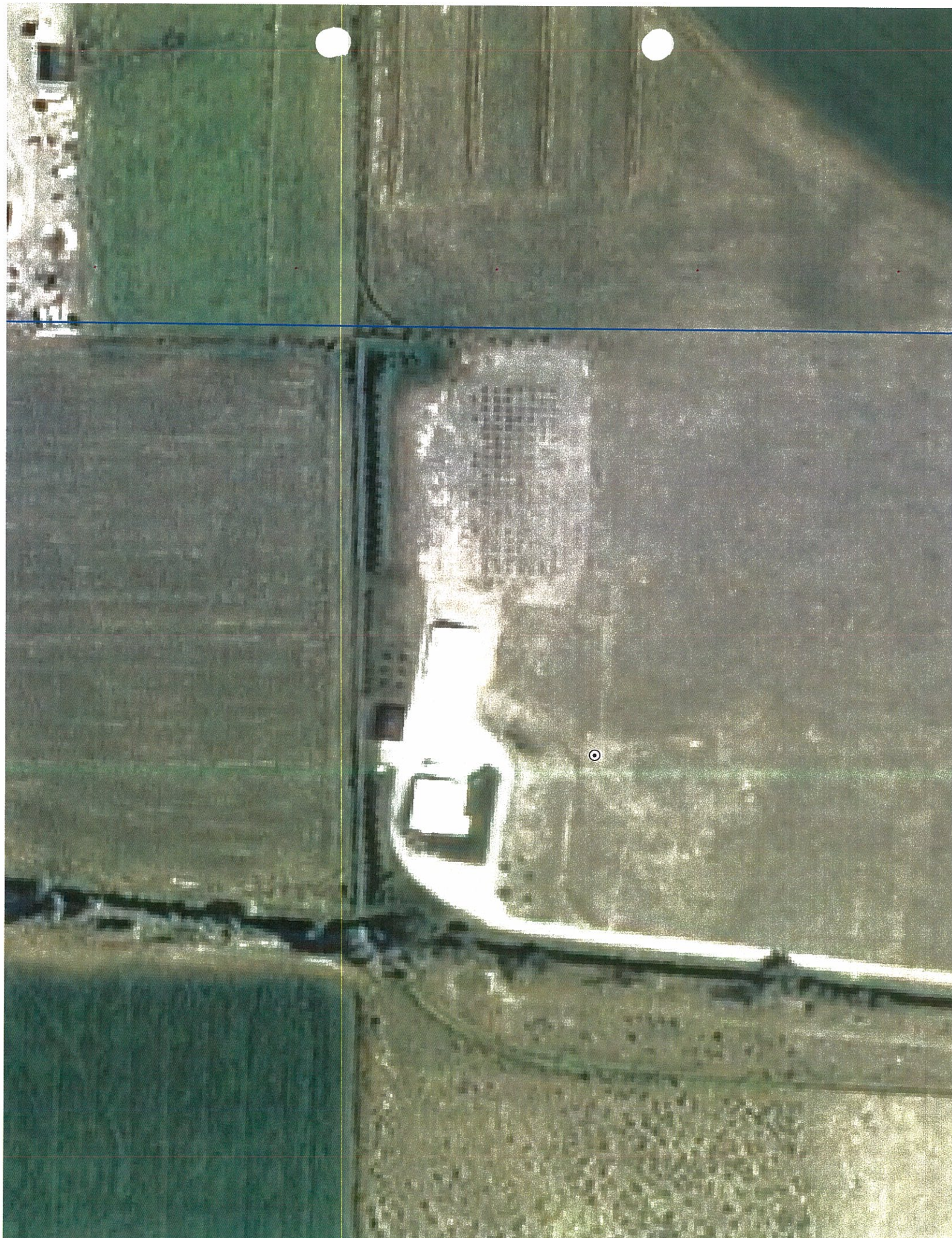
Season Of Use 4/15 - 10/31
Headgate Requirement 3.5
Consumptive Use 2.5
Administrative Basin 37
Ground Water Management Areas Big Wood River
Moratorium Area Eastern Snake River Plain Area
Trust Areas
Water District 37 - Big Wood River

No Details Available For This Record

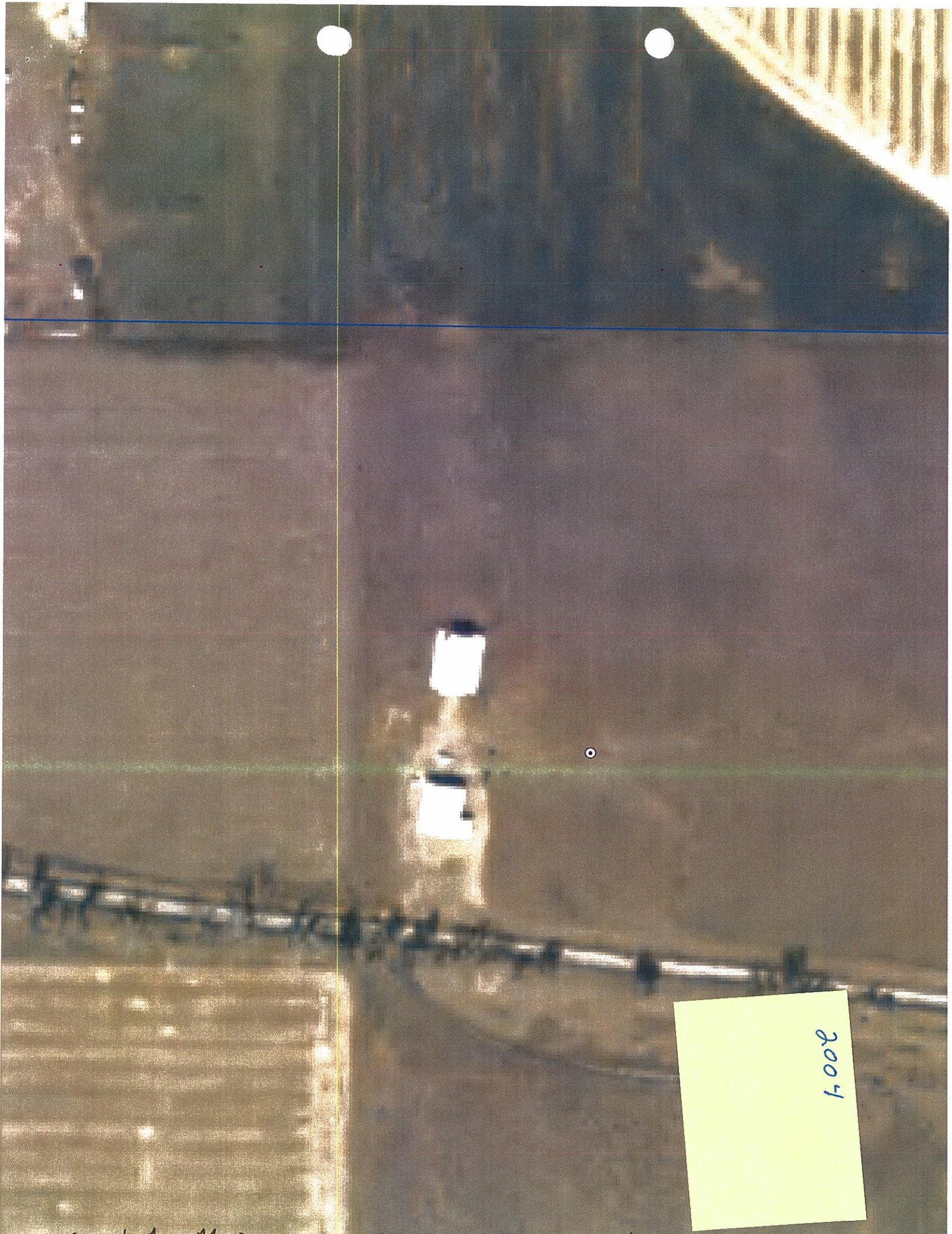
37-8553



S. Hernandez







2004

*Sprinkler
system*

HUNTER TYPE - IMPACT OR GEAR DRIVEN

Performance Data Standard Nozzles - 25-Degree Trajectory

Nozzle Number	PSI	Radius	GPM	Nozzle Number	PSI	Radius	GPM
 1	30	28'	.5	 7	30	36'	2.6
	40	29'	.6		40	40'	3.0
	50	29'	.7		50	42'	3.4
	60	30'	.8		60	42'	3.7
 2	30	29'	.7	 8	30	37'	3.2
	40	30'	.8		40	40'	3.7
	50	30'	.9		50	43'	4.2
	60	31'	1.0		60	44'	4.6
 3	30	30'	.9	 9	30	38'	4.2
	40	31'	1.0		40	43'	4.9
	50	31'	1.2		50	46'	5.5
	60	32'	1.3		60	47'	6.0
 4	30	32'	1.2	 10	40	45'	6.0
	40	33'	1.4		50	48'	6.8
	50	34'	1.6		60	49'	7.6
	60	34'	1.8		70	51'	8.2
 5	30	34'	1.6	 11	40	46'	8.0
	40	36'	1.8		50	48'	8.9
	50	38'	2.0		60	50'	9.8
	60	38'	2.2		70	51'	10.5
 6	30	36'	2.0	 12	40	46'	11.4
	40	38'	2.4		50	48'	12.2
	50	40'	2.7		60	50'	13.2
	60	40'	2.9		70	52'	14.4

Data represents test results in zero wind. Adjust for local conditions.
Optimum distribution efficiency is at 50 PSI.
Radius can be reduced by up to 30% with nozzle retaining screw.

Low Angle Nozzles - 13-Degree Trajectory

Nozzle Number	PSI	Radius	GPM	Nozzle Number	PSI	Radius	GPM
 4	30	22'	1.4	 8	30	31'	3.4
	40	24'	1.7		40	34'	3.9
	50	26'	1.8		50	37'	4.4
	60	28'	2.0		60	38'	4.7
 5	30	25'	1.6	 9	30	33'	4.3
	40	27'	1.9		40	37'	5.0
	50	28'	2.1		50	40'	5.6
	60	30'	2.3		60	42'	6.1
 6	30	27'	2.1	 10	40	38'	6.5
	40	30'	2.5		50	40'	7.3
	50	33'	2.8		60	42'	8.0
	60	35'	3.0		70	44'	8.6
 7	30	29'	2.8	 P	Blank nozzle plug for turning off selected sprinklers during repairs, maintenance, etc.		
	40	32'	3.1				
	50	35'	3.5				
	60	37'	3.8				

Data represents test results in zero wind. Adjust for local conditions.
Optimum distribution efficiency is at 50 PSI.
Radius can be reduced by up to 30% with nozzle retaining screw.

Matched Precipitation GPM at 50 PSI

Square Spacing	90° Nozzle No.	90° GPM	180° Nozzle No.	180° GPM	360° Nozzle No.	360° GPM
25'	1	.7	3	1.2	6	2.7
30'	2	.9	5	2.0	8	4.2
35'	3	1.2	6	2.7	9	5.5
40'	4	1.6	7	3.4	10	6.8
45'	5	2.0	8	4.2	11	8.9

When the arc/nozzle combinations are spaced as indicated, the precipitation rate will be approximately .4"/hr. at 50 PSI.

SprinklerWarehouse

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Hunter PCN Bubbler Nozzles

Hunter PCN Bubbler Nozzles

Hunter PCN Bubbler Nozzles are a way to meet your deep watering needs which offers considerably more efficiency than drip irrigation. With the ability to compensate for pressure differences, the Hunter PCN, which attaches directly to pop-up spray bodies, allows the output of water to remain constant regardless of input pressure, resulting in a precise application never before achieved in bubblers. Now, every plant, shrub or tree can receive the exact amount of water required with no excess runoff or waste. Best of all, because it's so simple to install, you'll have the perfect alternative to drip...no fancy filtration, no unsightly above-ground tubes, and considerably less chance of damage.

Sort By: Price: Low to High

10 per page Page 1 of 1



PCN-10 - Hunter PCN Bubbler Nozzles 1.0 gpm Bubbler
The pressure compensating nozzle (PCN); there is now a solution for deep watering needs that is specifically designed for the SRS; Pro-Spray; or Institutional Spray

List Price: \$2.30
Our Price: \$1.19
You save \$1.11!
FREE SHIPPING
On Orders Over \$149

 Qty 1 Add ☐


PCN-20 - Hunter PCN Bubbler Nozzles 2.0 gpm Bubbler
The pressure compensating nozzle (PCN); there is now a solution for deep watering needs that is specifically designed for the SRS; Pro-Spray; or Institutional Spray

List Price: \$2.30
Our Price: \$1.19
You save \$1.11!
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 Qty 1 Add ☐


PCN-25 - Hunter PCN Bubbler Nozzles 0.25 gpm Bubbler
The pressure compensating nozzle (PCN); there is now a solution for deep watering needs that is specifically designed for the SRS; Pro-Spray; or Institutional Spray

List Price: \$2.30
Our Price: \$1.19
You save \$1.11!
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PCN-50 - Hunter PCN Bubbler Nozzles 0.50 gpm Bubbler
The pressure compensating nozzle (PCN); there is now a solution for deep watering needs that is specifically designed for the SRS; Pro-Spray; or Institutional Spray

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Information about Bubbler Nozzles

POU Overlap for 37-8553 De Chevrier

Type	WR #	Owner	Source	TRS	NWNE	Total
Right	37 2307	FALL CREEK SHEEP CO LTD,	BIG WOOD 01N18E36		40	160
Rec	37 113H	GARY HOFFMAN,	BIG WOOD 01N18E36		16	23.3 property to south
Rec	37 891B	BASELINE CANAL CO,	BIG WOOD 01N18E36	X		0
Rec	37 1206	BASELINE CANAL CO,	BIG WOOD 01N18E36	X		0
Rec	37 4109	BASELINE PUMP ASSN # 1, BASE GROUND	V 01N18E36	X		0
Right	37 8553	AARON M DE CHEVRIEUX, STEP	GROUND V 01N18E36		3	3

No overlap.
No shares owned.