

Permit No: 1-7127

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 1-7127

Exam Date: 8/21/2012

1. Current Owner: J VAUGHN HOBSON (deceased)
19 S 700 W
BURLEY ID 83318
(208)678-2871

2. Accompanied by: Mark Hobson
Phone No: (208) 431-5381
Address: 24 South 700 West Burley ID
Relationship to Permit Holder: Son

3. SOURCE TRIBUTARY
SNAKE RIVER COLUMBIA RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Burley Irrigation District Water and domestic water rights
2. Other water rights with the same point of diversion: 01-2073

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

SNAKE RIVER L3 SE1/4SW1/4 Sec. 19, Twp 10S, Rge 22E, B.M. CASSIA County

Method of Determination: field visit and existing GPS from 1-2073

2.

PLACE OF USE: IRRIGATION

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	21E	25				3.0									30.3				33.3

Total Acres: 33.3

Method of Determination: field visit and aerial imagery

3. ☒ Delivery System Diagram Attached (required).
☒ 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>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
ID No.*					
See attachment #1					

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
NA						

2. Measurements: NA—The system could not be turned on to the full capacity at the time of the exam.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: Horsepower equation and pipe capacity

Horsepower equation with a efficiency of 70%

Depth to water: 3'

Pressure: 50 to 70 psi range

Horsepower: 40

$$8.8 \times 40 \times 0.7 / 3 + (50 \times 2.31) = 2.1 \text{ cfs}$$

$$8.8 \times 40 \times 0.7 / 3 + (60 \times 2.31) = 1.74 \text{ cfs}$$

$$8.8 \times 40 \times 0.7 / 3 + (70 \times 2.31) = 1.50 \text{ cfs}$$

Pipe capacity when system correctly designed at 5 fps

$$8" \text{ pipe capacity} = Q = 5\pi r^2 = 1.74 \text{ cfs}$$

Conclusion: The system can produce the permitted rate of 0.67 cfs. In addition, there should be no combined limit with right 01-2073 because the two rights add up to 1.73 cfs which is under the minimum capacity of this system assuming a pressure of 60 psi.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 33.3 \times 4 = 133.2 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.67 \times 246 \text{ days} \times 1.9835 = 327 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 133.2 \text{ afa}$$

2. Volume Calculations for Other Uses: NA

Conclusion: BID water is comingled in the pipe and is available to the POU. This water right should not include a volume since the water available under BID changes each year so, the volume of water under this right varies each year.

G. NARRATIVE/REMARKS/COMMENTS

The measuring device requirement of the permit has been waived by order in 1996. There is a condition on the permit that requires that the permit holder secure rental pool water each year. This condition has been met; I talked to water district 01 and confirmed that the permit holder rented 300 shares (300 af) of Palisades water each year since 1981.

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>
IRRIGATION	03/15 to 11/15	0.670 CFS	na
<u>Totals:</u>		0.670 CFS	na

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 Cherie Palmer Date 9/25/13

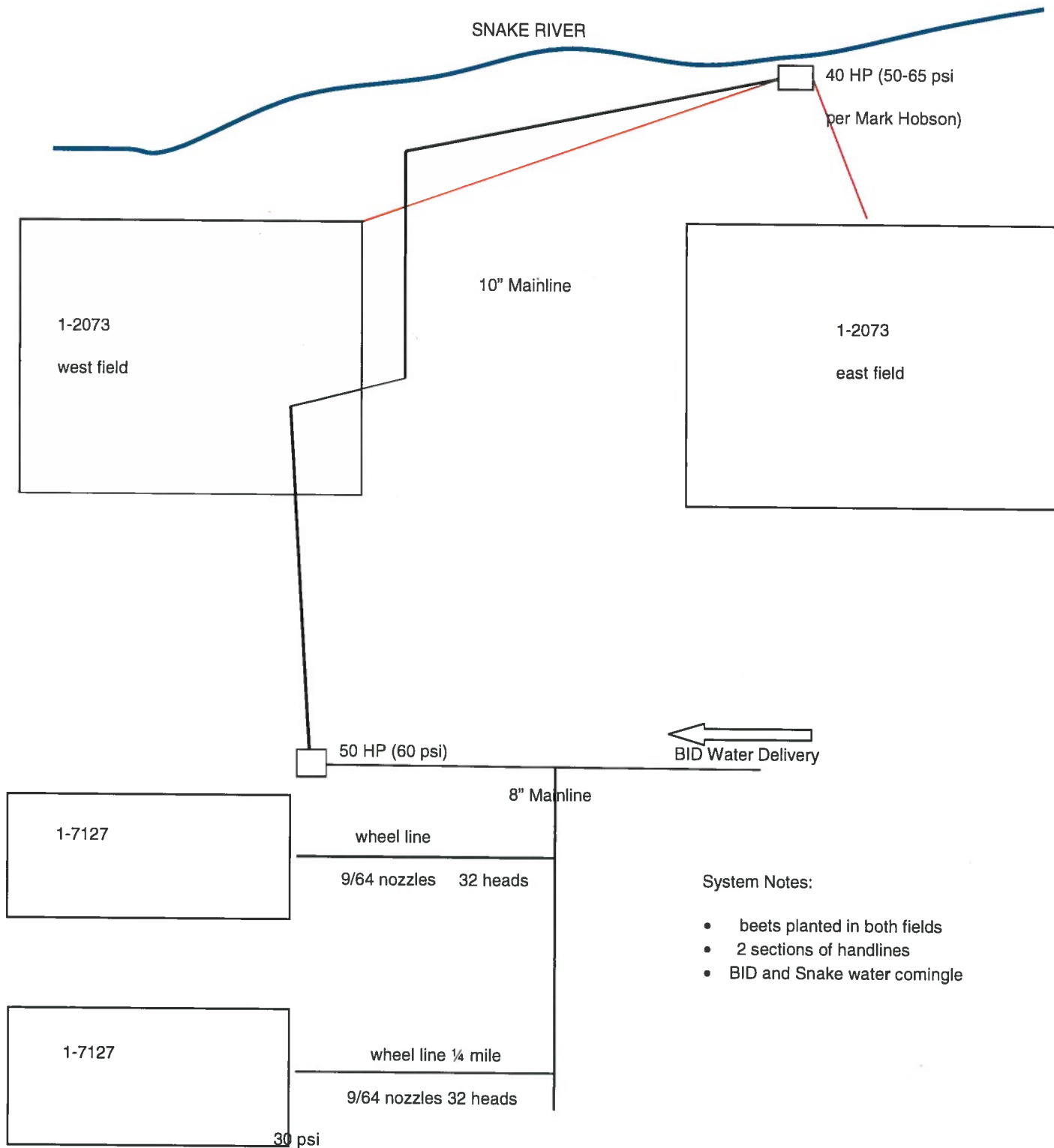
Reviewer _____ Date _____

2 Attachments

#1 - Pump & Motor Specs

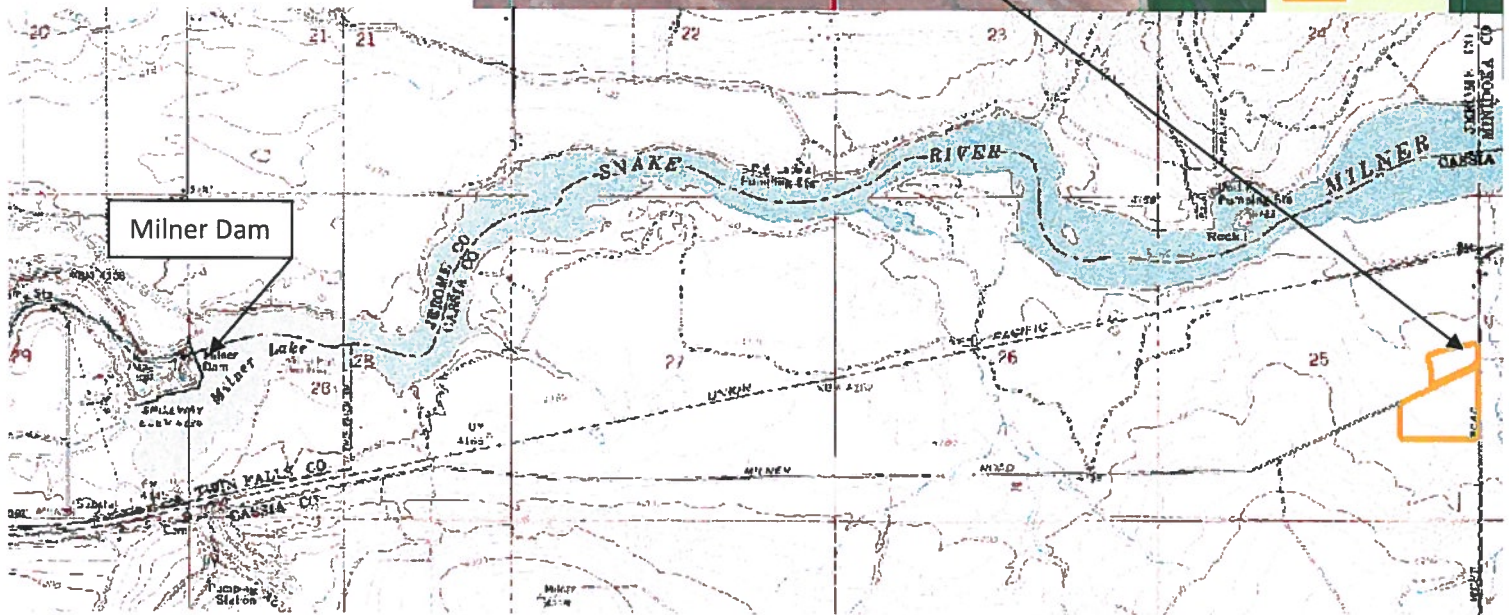
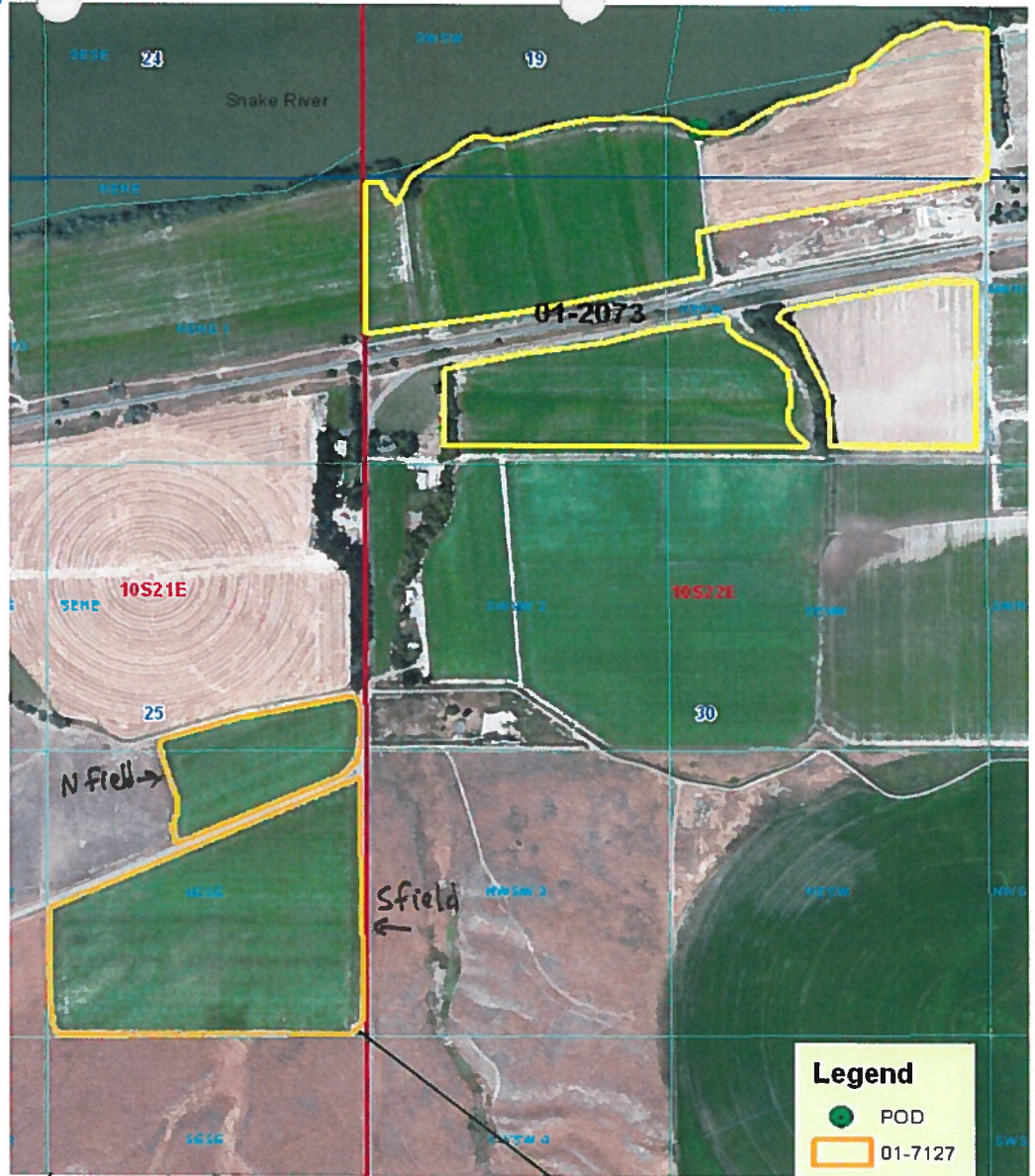
#2 - overlap analysis

System (not to scale and actual location of piping is not exact—see the survey for exact location of mainline)



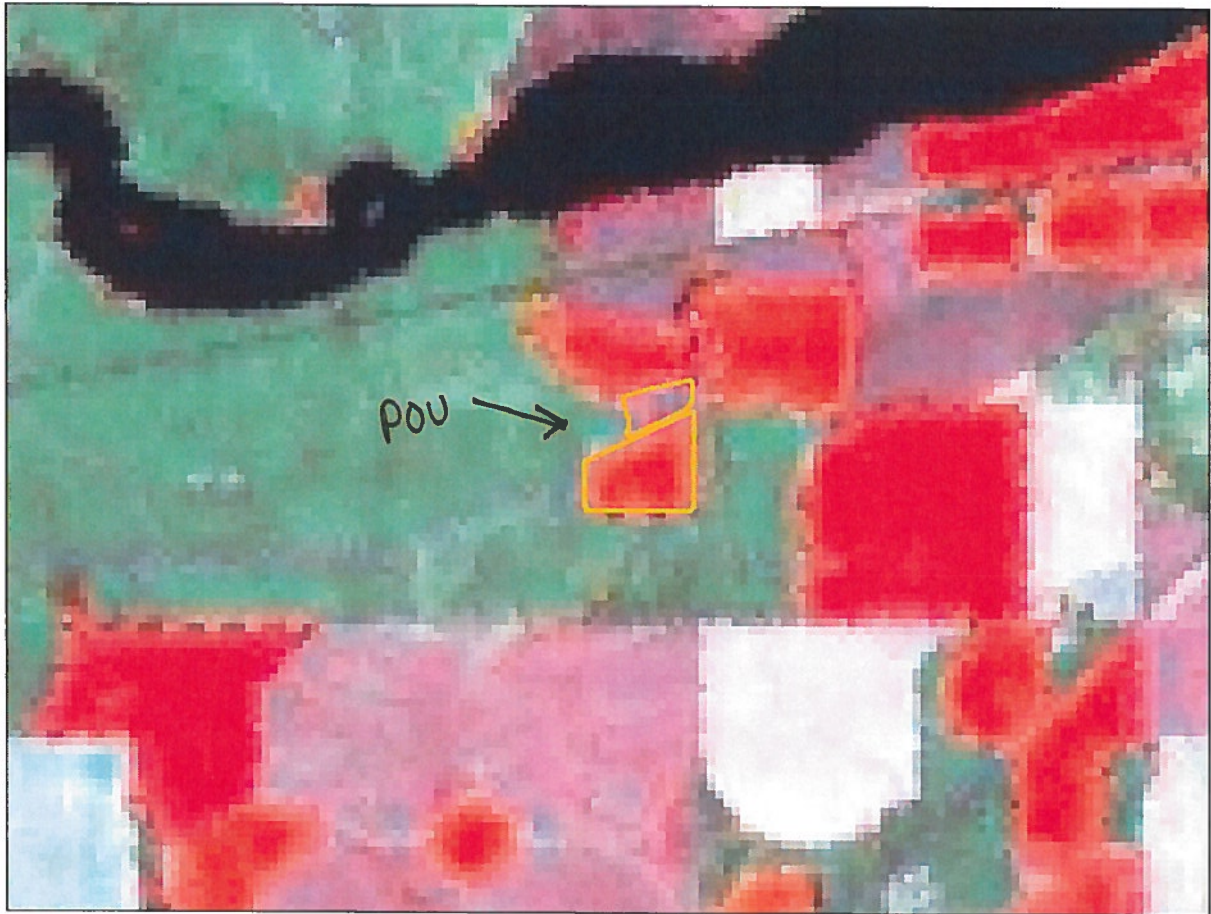
System Notes:

- beets planted in both fields
- 2 sections of handlines
- BID and Snake water comingle



5/1996 Landsat Imagery

Note that the imagery reflects that both field under the POU were irrigated the year proof was filed.





Point of
diversion



bank of the
Snake River
looking north
at PD



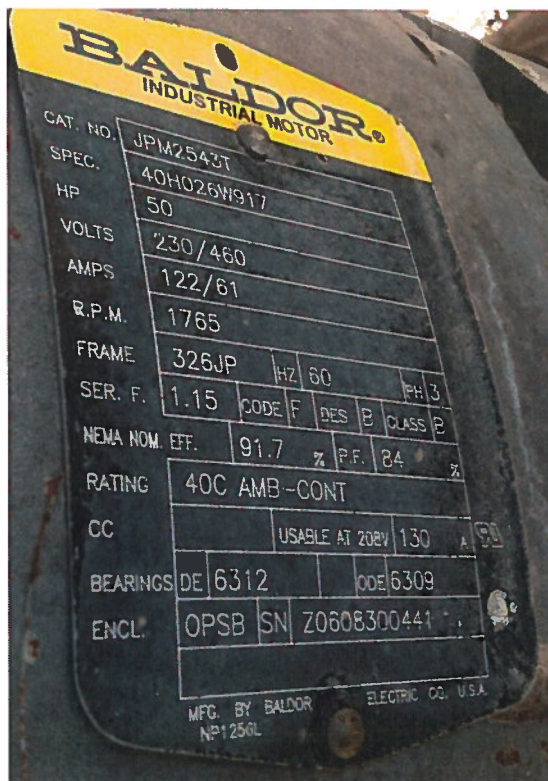
10" pipe to
fields under 01-207
and main to
fields under 01-712



Looking west at
conveyance system



50hp pump





Pump +
Motor for PD



Point where BLD
Water is combined
w/ Snake River water



← wheel lines

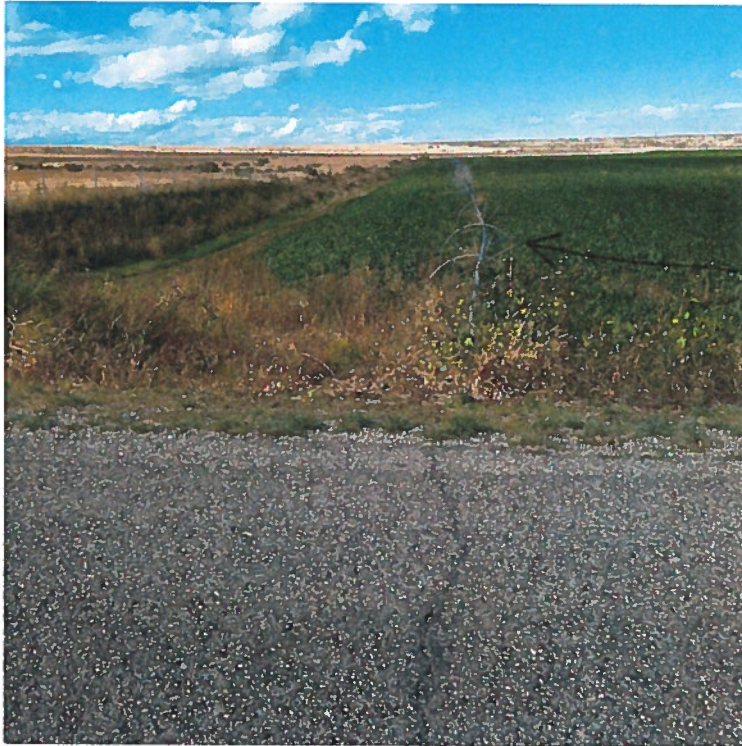
looking at the "N" field
Picture is looking east.

Piser



Re-lift station

Photo looking north



Looking at the "S" field

1/4 mile
wheel line

Looking east in photo



overall view of
"S" field

Photo is facing
South

01-7127
01-2073

Pump & Motor Specs

Motor/Pump Data

Motor (POD on Snake River)

Make: Baldor

Cat. No.: A15095D-55

HP: 40 DP

RPM: 1760

Rating: 40C AMB-CONT

Frame: 324JP

Serial: 295C-278

Spec.: 42F60X23G1

Volts: 230/460

Code: F

Amps: 92/46

Design: B

NEMA nom. eff.: 93.6

Phase: 3

Hz: 60

Class: B

PU Bearing: 6312

Series F.: 1.15

FR Bearing: 6311



Attachment #1

Pump

Make: Cornell

Model: 4RB-40-4

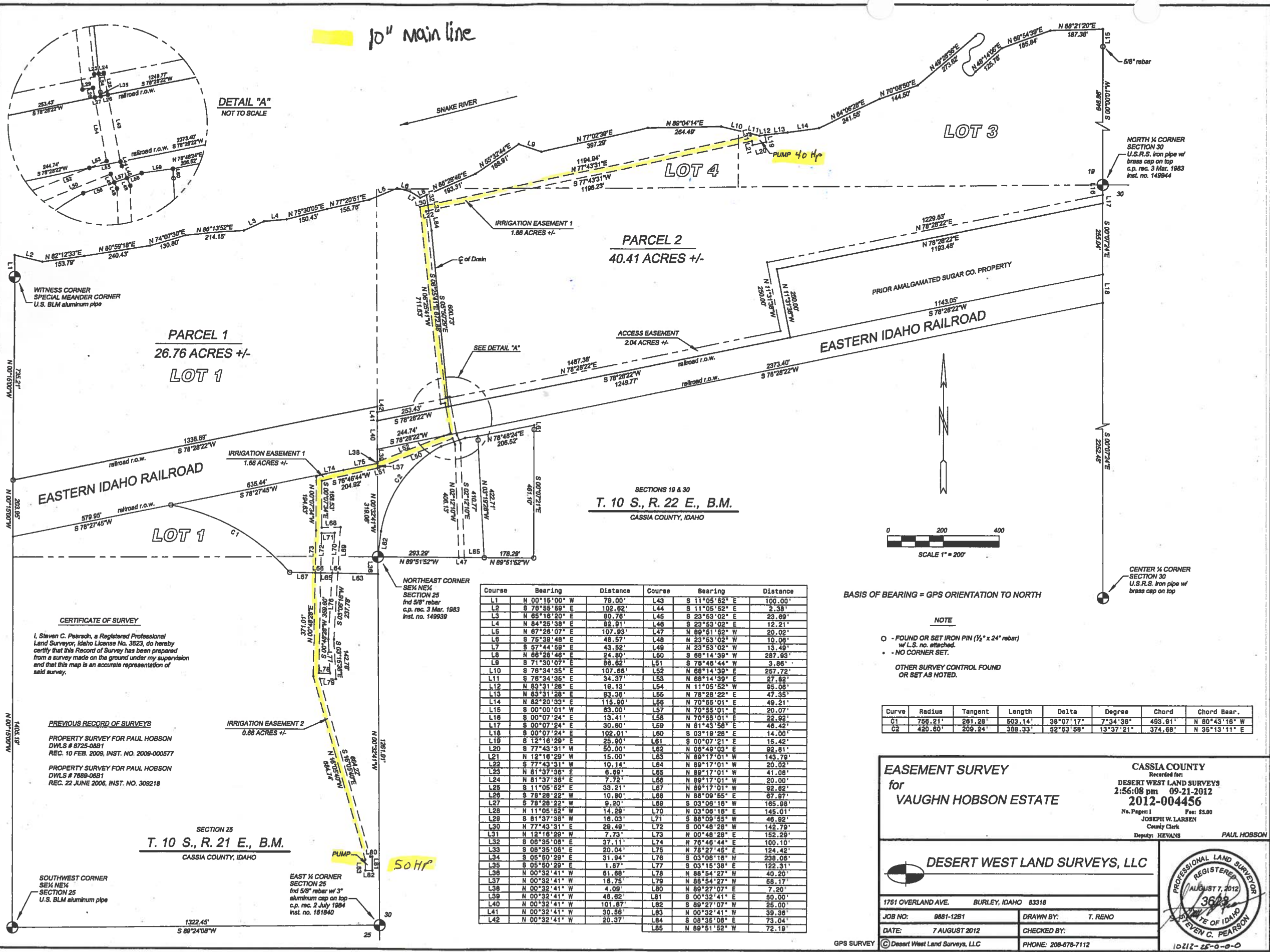
Serial No.: 89139 12.62



Attachment #2

Process	Basin Sequence	Draft	Owner	Source	SENE	NESE	Significant Overlap?
Water Right	1-211B	N	BURLEY IRRIGATION DISTRICT	SNAKE RIVER	X	X	NA
Water Right	1-214B	N	BURLEY IRRIGATION DISTRICT	SNAKE RIVER	X	X	NA
Water Right	1-7	N	BURLEY IRRIGATION DISTRICT	SNAKE RIVER	X	X	NA
Water Right	1-7127	Y	HOBSON, J VAUGHN	SNAKE RIVER	3.0	30.3	
Water Right	45-11131	N	HOBSON, J VAUGHN; HOBSON, OPAL B	GROUND WATER		X	N-Domestic Use
Water Right	45-11132	N	HOBSON, J VAUGHN; HOBSON, OPAL B	GROUND WATER	X		N-Domestic Use
Water Right	45-512	N	BURLEY IRRIGATION DISTRICT	MARSH CREEK	X	X	NA

Conclusion: there are no significant private water rights that overlaps with permit 01-7127. Mark Hobson does have BID water that is delivered to the POU.



CERTIFICATE OF SURVEY

I, Steven C. Pearson, a Registered Professional Land Surveyor, Idaho License No. 3623, do hereby certify that this Record of Survey has been prepared from a survey made on the ground under my supervision and that this map is an accurate representation of said survey.

PREVIOUS RECORD OF SURVEYS

PROPERTY SURVEY FOR PAUL HOBSON
DWLS # 8725-0881
REC. 10 FEB. 2009, INST. NO. 2009-000577

PROPERTY SURVEY FOR PAUL HOBSON
DWLS # 7688-0881
REC. 22 JUNE 2006, INST. NO. 309218

SECTION 25
T. 10 S., R. 21 E., B.M.
CASSIA COUNTY, IDAHO

SOUTHWEST CORNER
SECTION 25
U.S. BLM aluminum pipe

EAST 1/4 CORNER
SECTION 25
5/8" rebar w/ 3" aluminum cap on top
c.p. rec. 2 July 1994
inst. no. 161840

Course	Bearing	Distance	Course	Bearing	Distance
L1	N 00°15'00" W	79.00'	L43	S 11°05'52" E	100.00'
L2	S 78°55'59" E	102.02'	L44	S 11°05'52" E	2.38'
L3	N 85°16'20" E	80.78'	L45	S 23°53'02" E	23.89'
L4	N 84°25'38" E	82.81'	L46	S 23°53'02" E	12.21'
L5	N 87°28'07" E	107.93'	L47	N 89°51'52" W	20.02'
L6	S 75°39'48" E	48.57'	L48	N 23°53'02" W	10.06'
L7	S 57°44'58" E	43.52'	L49	N 23°53'02" W	13.49'
L8	N 68°28'46" E	24.80'	L50	S 68°14'39" W	287.93'
L9	S 71°30'07" E	86.82'	L51	S 78°46'44" W	3.86'
L10	S 78°34'35" E	107.68'	L52	N 68°14'39" E	257.72'
L11	S 78°34'35" E	34.37'	L53	N 68°14'39" E	27.82'
L12	N 89°31'28" E	18.13'	L54	N 11°05'52" W	95.08'
L13	N 83°31'28" E	83.36'	L55	N 78°28'22" E	47.35'
L14	N 82°20'33" E	115.80'	L56	N 70°55'01" E	49.21'
L15	S 00°00'01" W	83.00'	L57	N 70°55'01" E	20.07'
L16	S 00°07'24" E	13.41'	L58	N 70°55'01" E	22.92'
L17	S 00°07'24" E	30.80'	L59	N 81°43'58" E	46.42'
L18	S 00°07'24" E	102.01'	L60	S 03°19'28" E	14.00'
L19	S 12°18'28" E	25.80'	L61	S 00°07'21" E	15.42'
L20	S 77°43'31" W	50.00'	L62	N 08°49'03" E	92.81'
L21	N 12°18'28" W	15.00'	L63	N 89°17'01" W	143.79'
L22	S 77°43'31" W	10.14'	L64	N 89°17'01" W	20.02'
L23	N 81°37'36" E	6.89'	L65	N 89°17'01" W	41.08'
L24	N 81°37'36" E	7.72'	L66	N 89°17'01" W	20.00'
L25	S 11°05'52" E	33.21'	L67	N 89°17'01" W	92.82'
L26	S 78°28'22" W	10.80'	L68	N 88°09'55" E	67.87'
L27	S 78°28'22" W	9.20'	L69	S 03°08'16" W	165.98'
L28	N 11°05'52" W	14.28'	L70	N 03°08'16" E	145.01'
L29	S 81°37'36" W	18.03'	L71	S 88°09'55" W	46.82'
L30	N 77°43'31" E	29.49'	L72	S 00°48'28" W	142.79'
L31	N 12°18'28" W	7.73'	L73	N 00°48'28" E	152.29'
L32	S 08°35'06" E	37.11'	L74	N 78°46'44" E	100.10'
L33	S 08°35'06" E	20.04'	L75	N 78°27'45" E	124.42'
L34	S 05°50'29" E	31.94'	L76	S 03°06'16" W	238.08'
L35	S 05°50'29" E	1.87'	L77	S 03°15'38" E	122.31'
L36	N 00°32'41" W	61.68'	L78	N 88°54'27" W	40.20'
L37	N 00°32'41" W	16.75'	L79	N 88°54'27" W	68.17'
L38	N 00°32'41" W	4.09'	L80	N 89°27'07" E	7.20'
L39	N 00°32'41" W	46.82'	L81	S 00°32'41" E	50.00'
L40	N 00°32'41" W	101.87'	L82	S 89°27'07" W	25.00'
L41	N 00°32'41" W	30.86'	L83	N 00°32'41" W	39.38'
L42	N 00°32'41" W	20.37'	L84	S 08°35'06" E	73.04'
			L85	N 89°51'52" W	72.19'

BASIS OF BEARING = GPS ORIENTATION TO NORTH

NOTE

○ - FOUND OR SET IRON PIN (1/2" x 24" rebar)
w/ L.S. no. attached.

● - NO CORNER SET.

OTHER SURVEY CONTROL FOUND OR SET AS NOTED.

Curve	Radius	Tangent	Length	Delta	Degree	Chord	Chord Bear.
C1	758.21'	261.28'	503.14'	38°07'17"	7°34'36"	493.91'	N 60°43'16" W
C2	420.60'	209.24'	388.33'	52°53'58"	13°37'21"	374.68'	N 35°13'11" E

EASEMENT SURVEY
for
VAUGHN HOBSON ESTATE

CASSIA COUNTY
Recorded for:
DESERT WEST LAND SURVEYS
2:56:08 pm 09-21-2012
2012-004456
No. Pages: 1 Fee: \$5.00
JOSEPH W. LARSEN
County Clerk
Deputy: HEVANS
PAUL HOBSON

DESERT WEST LAND SURVEYS, LLC

1751 OVERLAND AVE. BURLEY, IDAHO 83318

JOB NO: 8881-1281 DRAWN BY: T. RENO

DATE: 7 AUGUST 2012 CHECKED BY:

GPS SURVEY © Desert West Land Surveys, LLC PHONE: 208-678-7112

PROFESSIONAL LAND SURVEYOR
REGISTERED
AUGUST 7, 2012
3623
STATE OF IDAHO
STEVEN C. PEARSON