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DEPARTMENT OF WATER RESOURCES
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Permit No: 2-10183

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-10183

Exam Date: 8/1/2002

1. Current Owner: ZEN SUGARWALA
7255 BOGGS LN
KELSEYVILLE CA 95451
(707)263-3172

And/Or

MELISSA SUGARWALA
7255 BOGGS LN
KELSEYVILLE CA 95451
(707)263-31722. Accompanied by: ZEN SUGARWALAPhone No: SAME AS ABOVEAddress: SAME AS ABOVERelationship to Permit Holder: PERMIT HOLDER3. SOURCE

SNAKE RIVER

TRIBUTARY

COLUMBIA RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 02-55A, 02-55B, 02-2113A, 02-2113C, 02-2113F, 02-2113H, 02-2113K, 02-10174, 02-10178, 02-10179, AND 02-7468 AND GEM IRRIGATION DISTRICT WATER.2. Other water rights with the same point of diversion: : 02-55A, 02-55B, 02-2113A, 02-2113C, 02-2113F, 02-2113H, 02-2113K, 02-10174, 02-10178, 02-10179, AND 02-7468

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SNAKE RIVER

L7 SE1/4NW1/4

Sec. 34, Twp 03N, Rge 04W, B.M.

OWYHEE County

Method of Determination:

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	
03N	04W	34					.8												.8
							L 8												

Total Acres: 0.8

Method of Determination:

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

YES Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

YES Aerial Photo Attached (required for irrigation of 10+ acres).

YES Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
POINT OF DIVERSION	AJAX MOTOR	5 Hp	NOSN	PARMA PUMP	8 INCH
RELIFT PUMP	CENTURY	25 Hp	SC-28607-FCA 9018377-00	BERKLEY	00116-W 8 INCH DISCHARGE

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
POLYSONICS	POLYSONIC METER	TYME FLYTE	TFP	N8J4626	N/A	3/2002

2. Measurements: SEE MEASUREMENT SHEETS FOR MEASUREMENTS

E. FLOW CALCULATIONS

YES Additional Computation Sheets Attached

Measured Method:

Measured flow → 1.29 cfs
 Theoretical Calculation → 1.31 cfs
 Permitted Amount → 0.04 cfs
 Maximum Allowable @ 0.03 cfs/acre → 0.02 cfs

PLEASE NOTE: This permit should be limited to the maximum allowable rate per acre or 0.02 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.8 \times 4.5 = 3.6 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \times 260 \times 1.9835 = 10.3 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.6 \text{ afa}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

The water for this permit is diverted from the Snake River in government Lot 7 (SENW), S34, T3N, R4W. The point of diversion is very close to the ¼ ¼ line, but the aerial photo does show that the boat ramp, which is right next to the pump, is in Lot 7. A pipeline has been placed approximately 25 to 50 feet into the river, which is the true point of diversion. The pipeline is connected to a 3-foot culvert on the riverbank, and the water level in the culvert matches the water level of the river. A 5Hp Parma Pump lifts the water out of the culvert and open discharges the water across a set of screens into a cement staging box. From the staging box the water is diverted into a mainline by a 25 Hp relift pump. The relift pump pressurizes the water to approximately 57 psi, and delivers it to several different parcels for irrigation with sprinklers. The water users use handlines and wheel lines to irrigate their specific properties.

Currently water rights 02-55A, 02-55B, 02-2113B, 02-2113C, 02-2113F, 02-10174, 02-10178, and 02-10179 use this same system to irrigate their property. The owner of this permit, the Sargarwalla's, also own water right 02-10174. However, the Sargarwalla's were only allowed 3.8 acres worth of irrigation with the purchase of their property under 02-10174, and this permit was filed to provide irrigation from this system for their entire 5-acre parcel. Please see Sue Bock's memo in adjudication file 02-10174 for details of the amount of irrigation allowed under the adjudication claim. The field exam showed that the Sargarwalla's are irrigating only 4.6 acres of the 5-acre parcel, so the maximum amount of irrigation allowable under this permit is 0.8 acres (4.6 actual irrigation – 3.8 from 02-10174 = 0.8 acre allowable under this right).

The Sargarwalla's property was a part of a large farm that was subdivided several years ago. The original farm was irrigated under water rights 02-55, 02-2113, and Gem Irrigation District water. The Gem Irrigation District water has never irrigated the property owned by the Sargarwalla's, but was used to irrigate the fields to the west of the pond shown in the aerial photos. Both 02-55 and 02-2113 were diverted from the same point of diversion and delivered to the western portion of the farm. After the property was subdivided the water rights were split several times into the individual owners names. With the division of the property, 3 of the current owners have filed transfers or accomplished transfer in the Snake River Basin Adjudication (SRBA) to have their own points of diversion and be separated from the main system. The three users with their own diversions are 02-2113A, 02-2113H, and 02-2113K.

I have limited the recommended diversion rates and volumes to the department standard of 0.03 cfs per acre and 4.5 afa per acre. Therefore the license should be limited to 0.02 cfs and 3.6 afa. When combined with all other water rights the 4.6-acre of irrigation should be limited to a combined total of 0.14 cfs and 20.7 afa. Transfer 70031 filed on 02-2113H, stated that the diversion system was in disrepair, and that several of the water users were looking to file transfers and develop their own points of diversion. Therefore, I believe this system will be changing and many of the water users currently using the same point of diversion may be filing transfers to develop personal points of diversion and getting off of the community system. The pump system has a capacity of 1.29 cfs, and the combined total of all the rights currently using the system is 1.23 cfs. The pump has sufficient capacity to service all the current water rights using the shared system; therefore, it may not be prudent to include a condition with the other water rights that use the same point of diversion at this time.

Have conditions of permit approval been met? X 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	03/01 to 11/15	0.020 CFS	3.60 AF
<u>Totals:</u>		0.020 CFS	3.60 AF

2. Recommended Amendments

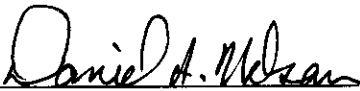
___Change P.D. as reflected above ___Add P.D. as reflected above ___None

___Change P.U. as reflected above ___Add P.U. as reflected above ___Other

I. AUTHENTICATION

DANIEL A. NELSON – SENIOR AGENT

Field Examiner's Name



Date

3-3-05

Reviewer _____

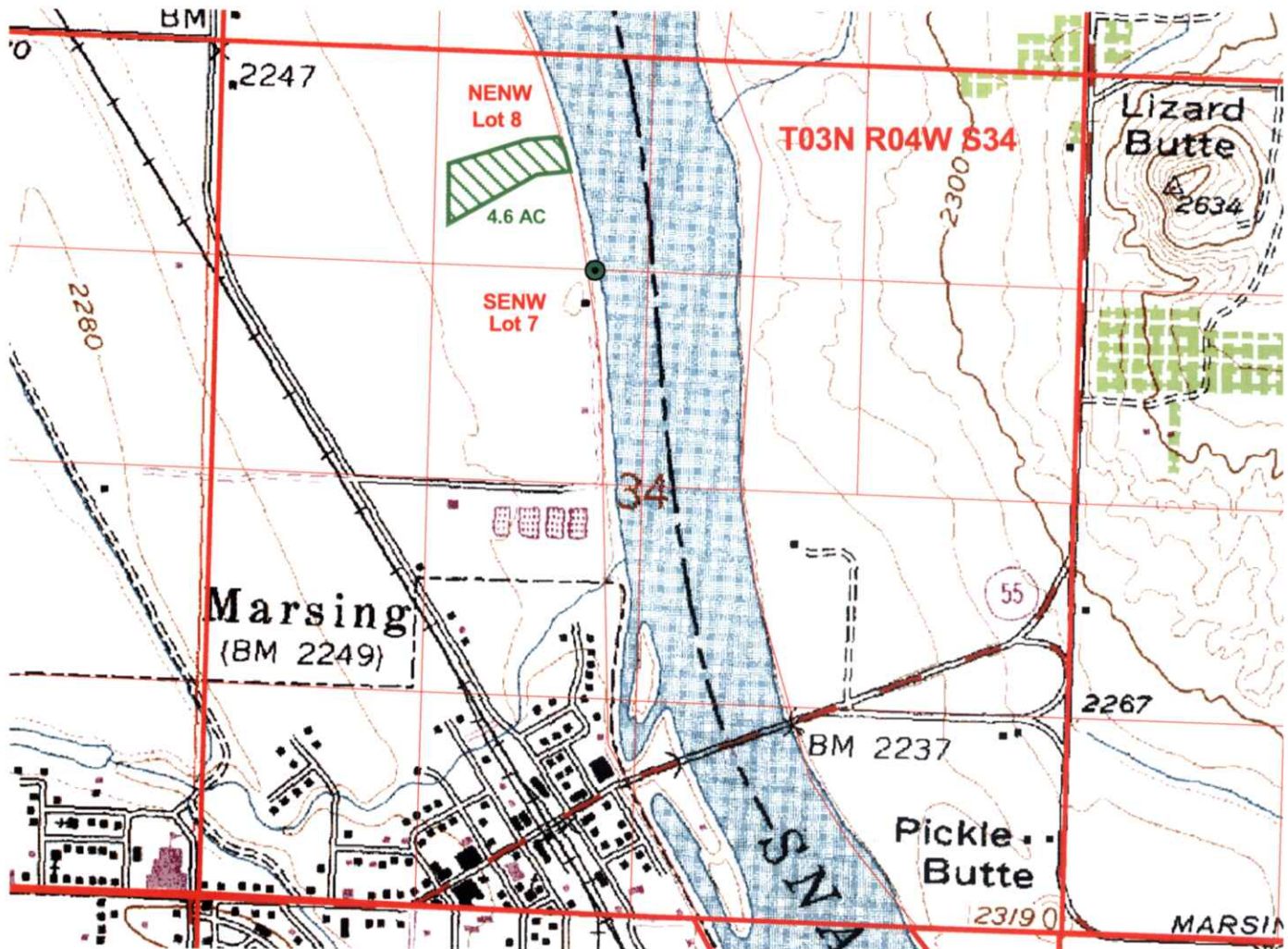
Date _____

SEAL

FIELD EXAM 02-10183

PLACE OF USE

BY DAN NELSON



- Place of Use
- Point of Diversion
- Section Lines
- 1/4 1/4 Lines

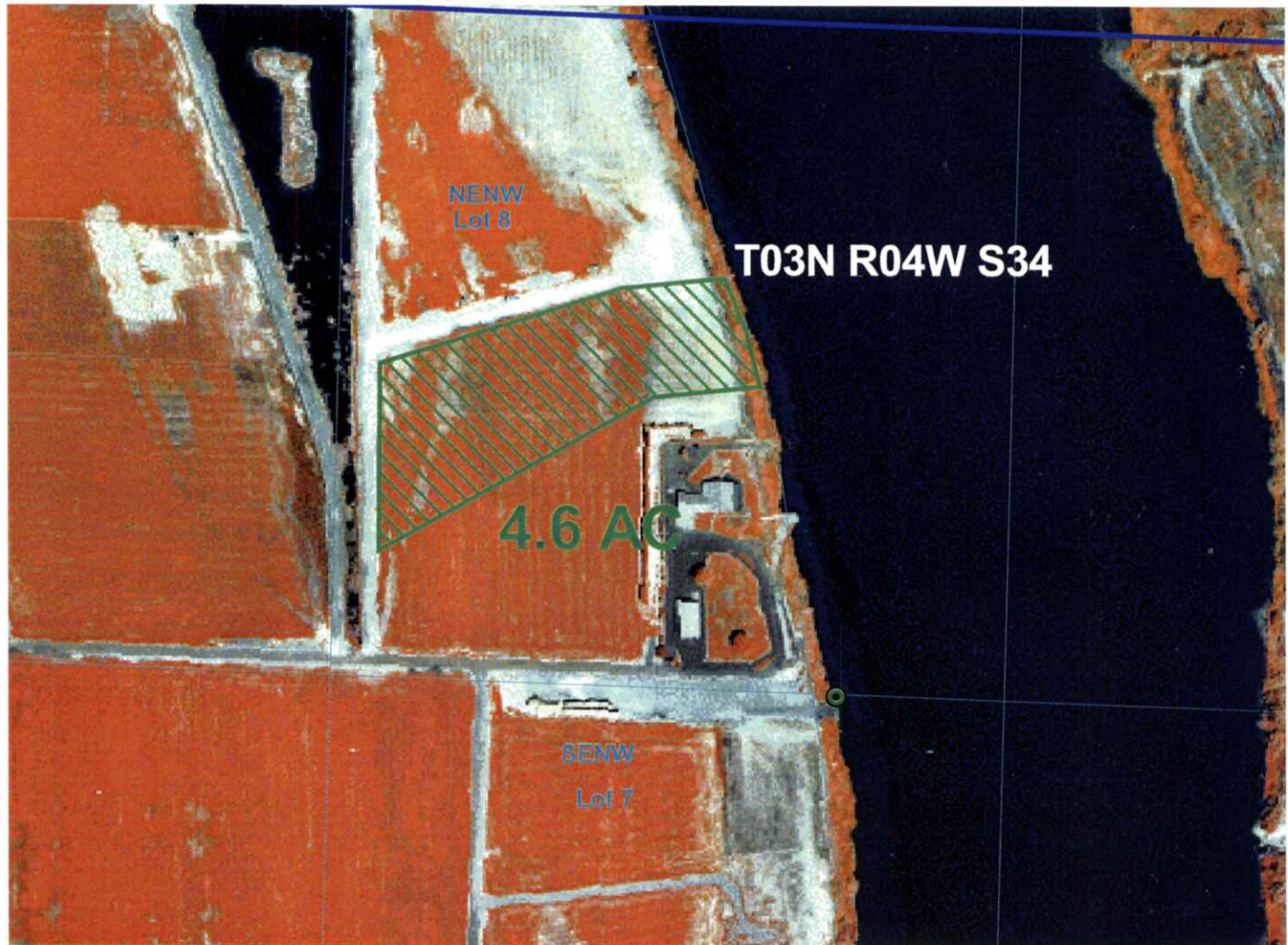
Please Note: The place of use was determined by using the legal description supplied with the warranty deed on the change of ownership forms. The warranty deed describes the easement for the road running along the west side of the property. The total acreage owned is 5 acres, but only 4.6 acres is irrigated. Water right 02-10174 irrigates 3.8 acres of this 4.6 acre parcel. Therefore, this permit can only be licensed for 0.8 acres. The point of diversion is very close to the 1/4 1/4 line but it is actually in the SENW Lot 7.



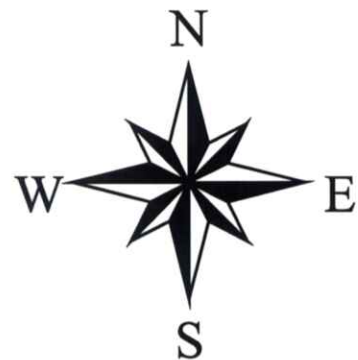
FIELD EXAM 02-10183

PLACE OF USE

BY DAN NELSON



-  Place of Use
-  Point of Diversion
-  Section Lines
-  1/4 1/4 Lines



FIELD EXAM 02-10183

SYSTEM DIAGRAM

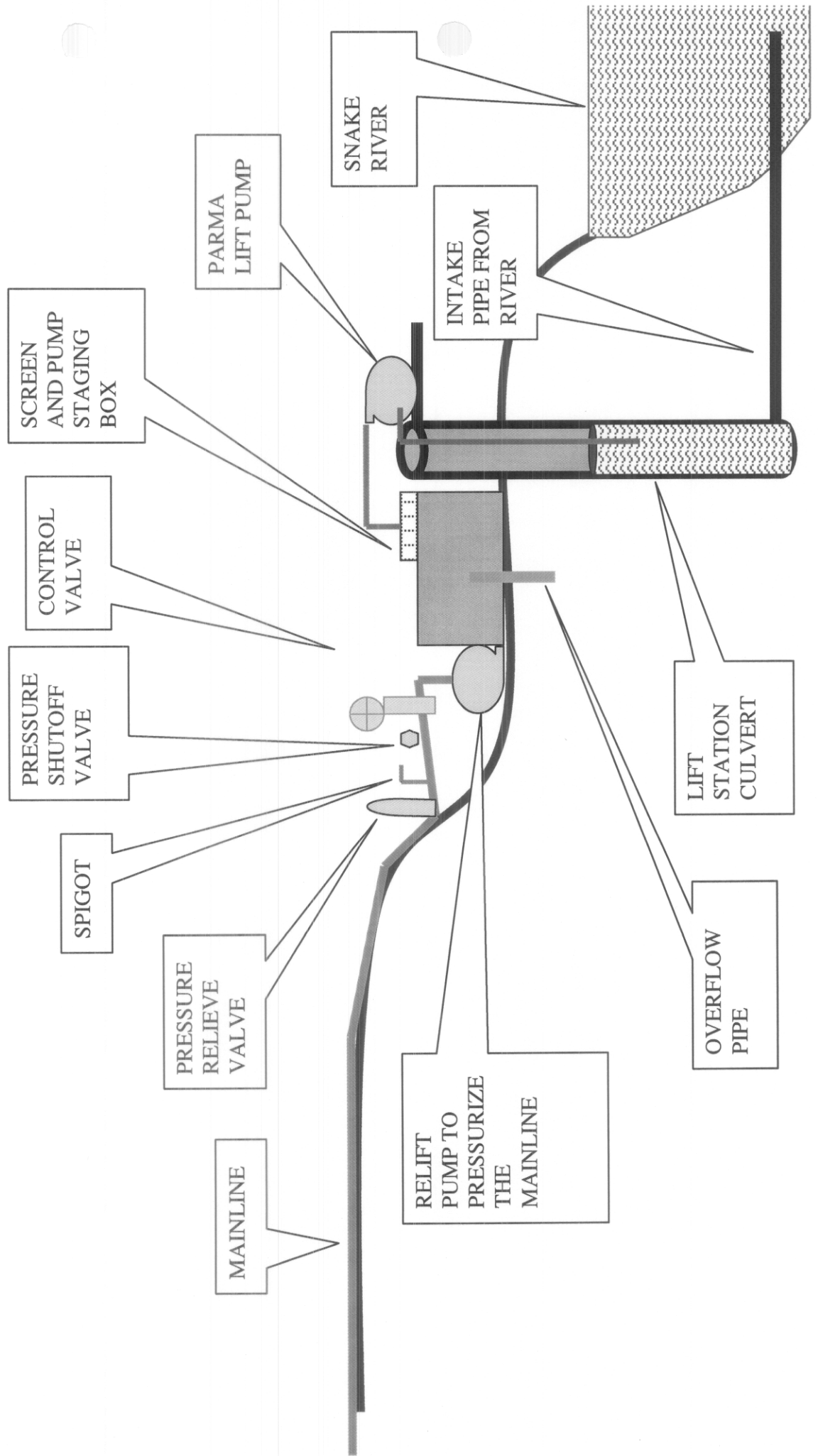
BY DAN NELSON



-  Mainlines
-  Place of Use
-  Point of Diversion
-  Section Lines
-  1/4 1/4 Lines



SYSTEM DIAGRAM FIELD EXAM 02-10183



Record ID		Measured Flow: 1.29 cfs	
Water Right No. 02-10183		Designed Flow:	
Name Sargarwala		HP/Eff Flow: 1.31 cfs <--Max	
pod Snake River Diversion		Sprinkler Flow:	
year: 8/1/2002		Pivot/System Flow:	
Flow Measurement: 577 gpm = 1.29 cfs			
Curve/Pump Design: gpm =			
Horsepower / Efficiency Method			
Horsepower	25 hp		
PWL	-2 ft		
Disch Psi	57 psi		
PUMP Eff Estimate	0.77 %		
TDH	130 ft		
OHP	19.25 hp		
Flow	588 gpm	=	1.31 cfs
System Method:			
No Lines		Nozzle Equation: $Q = C \cdot A \cdot \sqrt{2 \cdot g \cdot h} / \sqrt{1 - r^4}$	
Birds per line		C=	1.00 Nozzle coefficient; typical 0.97 to 1.00
Ttl no nozzles	0	r=	0.0000 ft Nozzle radius
Nozzle size	in	A=	0.00000 ft^2 Nozzle area
Nozzle pressure	psi	h=	0 ft Head
Flow per nozzle	0.00 gpm	g=	32.2 ft/sec^2 Gravitational constant
Sprinkler Flow	0 gpm	Q=	0.000 cfs Flow per nozzle
Percent Leaks	%	=	0.000 gpm Flow per nozzle
Total Flow	0 gpm		
Pivot / System rating	gpm		

Comments / Data Supplied:

The pump Hp was attained from the name plate, the PSI was attained from the owners gauge. The owner's guage was bouncing quite a bit making it difficult to determine actual pressure reading. I took the average. The pump was sitting at the bottom of a cement vault. There was approximately 2 feet of water above the intake pipe. I used "0" lift because using a negative number didn't calculate correctly. Therefore, theoretical flow could be slightly higher.

ASSUMPTIONS

- "Horsepower" is the motor shaft horsepower, equivalent to nameplate for a fully loaded motor
- "PUMP Eff Estimate" is the efficiency of the pump only; motor efficiency would be included to assess total pumping system efficiency. Over-ride this value if additional information (such as a pump curve) is available.
 - .73 for <7.5 hp
 - .76 for 7.5 to <15 hp
 - .77 for 15 to <40 hp
 - .79 for 40 to <75 hp
 - .82 for 75 hp and larger

The sprinkler equations assumes new nozzles; increase "Percent Leaks" to account for wear.

POLYSONIC READINGS

PERMIT #: 02-10183

POINT OF DIVERSION: Snake River Diversion

FIRST SET OF INFORMATION: Set-up impute data used during preparation for flow measurement.

SECOND SET OF INFORMATION: These are the readings taken for this pump. The total flow was averaged over a 10-minute period.

FLOWS IN GALLONS PER MINUTE (GPM): 577 GPM FLOW RATE

FLOWS IN CUBIC FEET PER SECOND (CFS): 577 GPM / 448.8 = 1.29 CFS FLOW RATE

SET UP

MODE SELECT
INPUT

OUTER DIAMETER
6.0100 IN

PIPE MATERIAL
? CS,SS

WALL THICKNESS
0.1050 IN

INNER LINING
? NO LING.

KIND OF FLUID
? WATER

SENSOR MOUNTING
? U

TYPE OF SENSOR
? SMALL

DATA CHANGE
? NO

SPACING
4.081 IN U

MODE SELECT
T0 CHECK

0217.8 MMSEC
100.53 % T0

08-01 10:4400 *R
+001.70 % A12

08-01 10:4600 *R
+594.123E 0GPM

Flow Readings

10:50+584.612E 0GPM 00R
+00000 *10 G 00R
-000000 *10 G 00
-000000 *10 G 00R

10:51+579.593E 0GPM 00R
+00115 *10 G 00R
-000000 *10 G 00R

10:53+578.801E 0GPM 00R
+00174 *10 G 00R
-000000 *10 G 00R

10:54+581.442E 0GPM 00R
+00232 *10 G 00R
-000000 *10 G 00R

10:55+585.141E 0GPM 00R
+00291 *10 G 00R
-000000 *10 G 00R

10:56+573.781E 0GPM 00R
+00348 *10 G 00R
-000000 *10 G 00R

10:57+577.216E 0GPM 00R
+00406 *10 G 00R
-000000 *10 G 00R

10:58+583.556E 0GPM 00R
+00464 *10 G 00R
-000000 *10 G 00R

10:59+577.480E 0GPM 00R
+00522 *10 G 00R
-000000 *10 G 00R

10:59+578.801E 0GPM 00R
+00577 *10 G 00R
-000000 *10 G 00R

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 8/1/2002

FILE NUMBER 02-10183



These are photos of the place of use.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 8/1/2002

FILE NUMBER 02-10183

