

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8571

Exam Date: 6/21/2012

1. Current Owner: AUBREY SPRING RANCH LLC

 ~~8836 N HESS ST STE D~~
~~HAYDEN ID 83835~~
~~(208) 762-5534~~

2. Accompanied by: Stephen Barnard

Phone No: (650) 644-9516

Address: 130 Treasure Lane, Hailey ID 83333

Relationship to Permit Holder: Current Owner

- 3.
- SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 37-349; 37-348; 37-350; 37-1071A; 37-1093; and 37-8569.
2. Other water rights with the same point of diversion: 37-2553A (irrigation); 37-22777 (irrigation).

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

SE1/4SE1/4NE1/4

Sec. 14, Twp 01S, Rge 19E, B.M.

BLAINE County

Method of Determination: Waypoints were collected with a Garmin GPSmap 60CSx receiver and downloaded into an ArcMap shapefile that corresponds with 2009 and 2011 aerial photography and verified the points of diversion are located as recorded. See attached map.

2.

PLACE OF USE: WILDLIFE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	19E	13										X							
01S	19E	14				X									X				

Method of Determination: Tracks were collected with a Garmin GPSmap 60CSx receiver and downloaded into an ArcMap shapefile that corresponds with 2009 and 2011 aerial photography and verified the place of use is located as recorded. See attached map.

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 ID No.*</u>	<u>Motor Make</u>	<u>Hp</u> 40	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
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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>
Flow Meter	Sonic	Fuji	Portaflow	7K0085TB		April 2012
Pressure gauge						
Micrometer Flow Meter at the Lazy Triple J indicated 553 gpm or 1.2 cfs						

2. Measurements: Flow meter measured a rate **2451.5 gpm or 5.46 cfs** from the well.

Irrigation was estimated using a pressure gauge, counting the number of sprinklers and verifying the nozzle diameter used. On Aubrey Spring Ranch seven wheel lines and three hand lines were in operation with 228 impact sprinklers equipped with 1 1/64 brass nozzles. The irrigation system on the Lazy Triple J Ranch utilizes 2 wheel lines with a total of 66 impact sprinklers equipped with 13/64 brass nozzles. Results are as follows:

# of Sprinklers	@ PSI	Estimated GPM per Nozzle	Total GPM
8	64	6.84	54.72
38	56	6.46	245.48
60	60	6.70	402.00
25	55	6.40	160.00
22	56	6.46	142.12
28	62	6.71	187.88
6	66	6.96	41.76
3	73	7.32	21.96
38	60	6.70	254.6
			1510.52 GPM or 3.4 CFS
Lazy Triple J Ranch			
34	40	7.60	258.4
32	37	7.30	233.6
			492 or 1.1 cfs

E. **FLOW CALCULATIONS** None ☐ Additional Computation Sheets Attached

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 5.0 \times 365 \times 1.9835 = 3619.9 \text{ AFA}$$

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

2. Volume Calculations for Other Uses: Well operated during irrigation season: **5.0 x 200 x 1.9835 = 1983.5 AFA****G. NARRATIVE/REMARKS/COMMENTS**

Permit 37-8571 is for 5.0 cfs ground water for Wildlife.

Application for permit 37-8571 was submitted William A. McMahan on 4/23/1991 and proof of beneficial use was submitted 9/28/1993. Permit was assigned to Aubrey Springs Ranch LLC on 10/22/1996.

The ponds and stream that link them were originally developed on a drain channel. The drain channel was filled in but the ponds and stream between them were preserved to provide habitat for wildlife. A well was developed to provide ground water for irrigation and flow through the pond system under this permit (see attachment 1 for complete system description). There is a stilling pond with a 6' sharp crested weir at the south end of the ponds that can divert overflow from the ponds either to Loving Creek or to a recirculation pump that can cycle water back up to the culvert used to divert water to the ponds and/or the irrigation pump. The former ranch manager indicated the well was in operation year round to maintain flow to prevent icing and oxygenation for the fish. Power record data that was available (1995 and 1996) was inconclusive, and didn't demonstrate the well was in use outside of the irrigation season. Therefore, the recommended volume will be based on 5.0 cfs pumped during the irrigation season only. See attachment 3 for 1995 and 1996 power record data.

Well production was measured at 5.46 cfs using a Fuji Portaflow sonic flow meter. See attachment 2 for log results. Two of the log entries recorded as abnormal, but the flow rates were in the same range as the normal log entries, so all data collected was utilized to determine production from the well. Measurements earlier this summer using a pressure gauge and counting sprinkler heads while running the entire irrigation system on the Aubrey Spring Ranch yielded a total flow of 3.4 cfs at the sprinkler lines and it was noted that at that time, 1.74 cfs was observed flowing over the weir that discharges water into Loving Creek for further redistribution and irrigation use on the Lazy Triple J Ranch to the south. Combining the 3.4 cfs and 1.74 cfs results in a total of 5.14 cfs which is very close to the 5.46 cfs measurement obtained using a Fuji Portaflow sonic flow meter. Note that these amounts are even closer if allowances are made for leaks in the irrigation lines and possible losses in the ponds upstream of the weir that discharges water into Loving Creek.

The original intention of this permit was to use this water for the ponds in the non-irrigation season and use it for both irrigation and the ponds during the irrigation season. This permit is considered non-consumptive as the flow through the ponds from the well is diverted to Loving Creek whenever the pump is running.

This permit overlaps with permit 37-8569 which provides wildlife storage in the amount of 8.2 cfs for the ponds, and will be forwarded for licensing with this permit. The following rights appear to be historical irrigation rights that overlap with the place of use, research indicates none were renumbered or split and/or were claimed in the SRBA: 37-349; 37-348; 37-350; 37-1071A; and 37-1093.

Recommend licensing 5.0 cfs for Wildlife with an annual volume of 1983.5 AFA.

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>
WILDLIFE	1/01 to 12/31	5.000 CFS	1983.5
	<u>Totals:</u>	5.000 CFS	1983.5

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

Reviewer

Date

[Signature] *[Signature]* 12-10-12
[Signature] 1/14/13

Attachment 1: System Diagram:

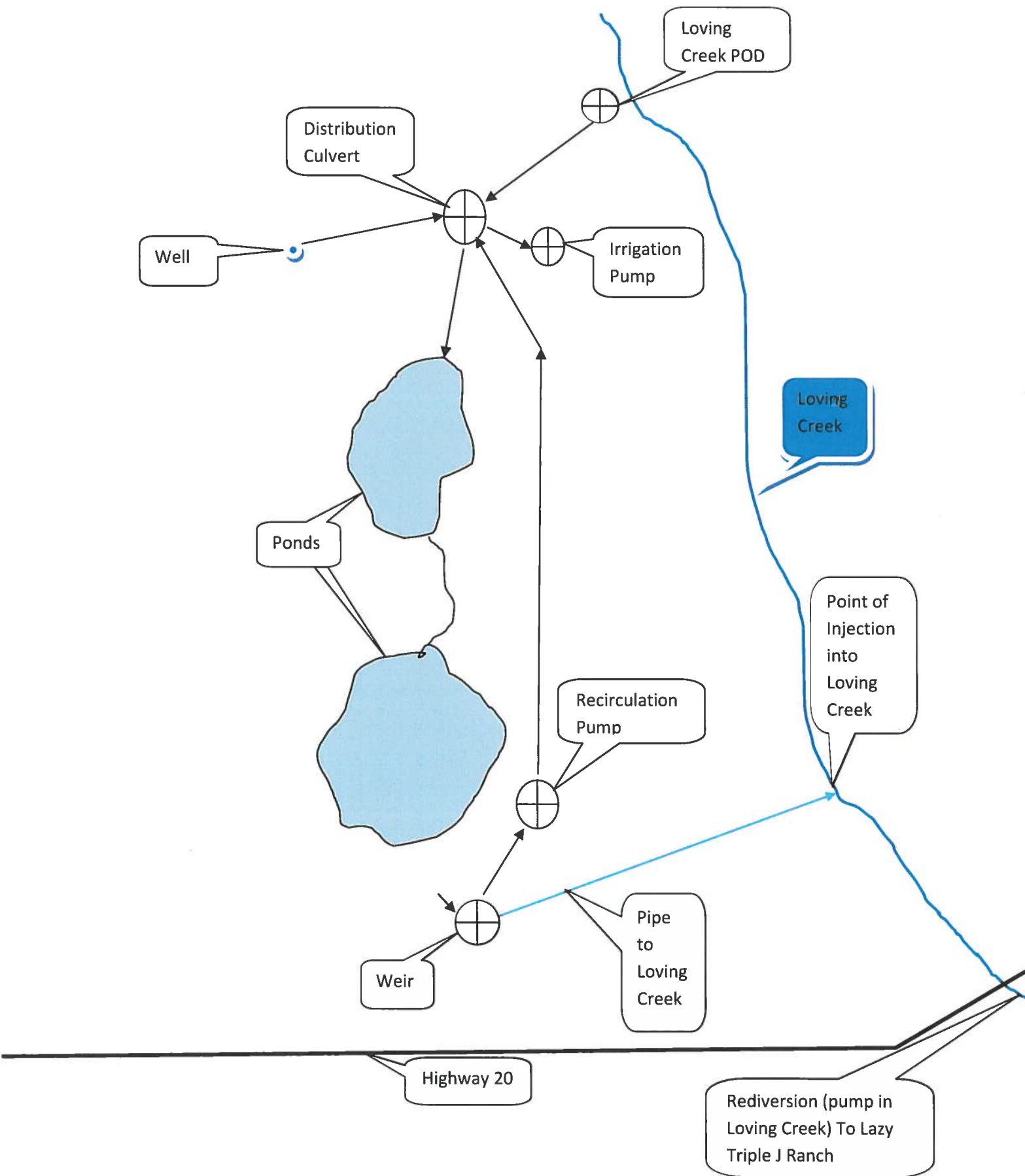




Figure 1: North pond from the northwest

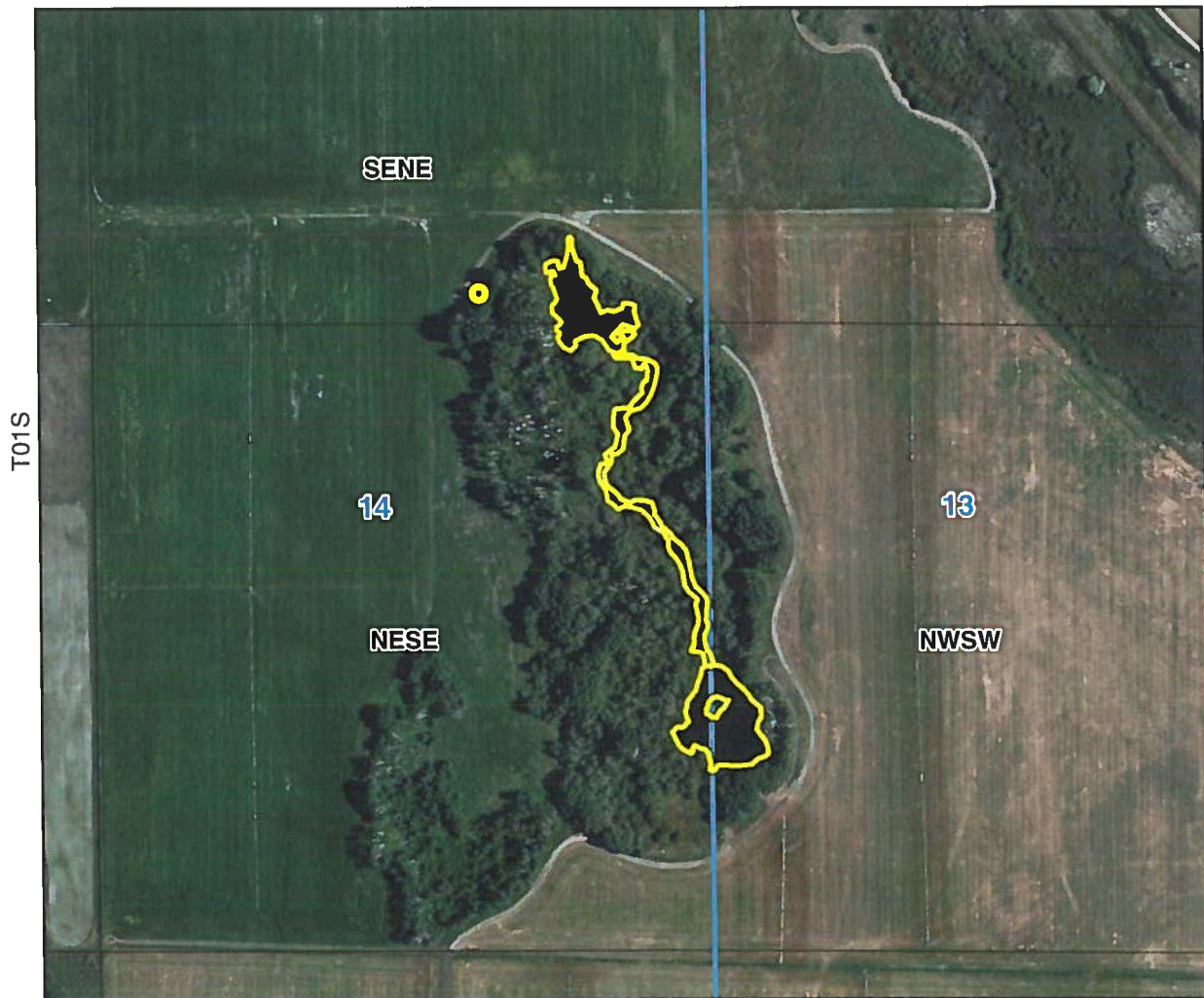


Figure 2: South pond from the southeast

State of Idaho
Department of Water Resources
Attachment To Water Right License
37-8571

This map depicts the WILDLIFE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

R19E



0 0.0475 0.095 0.19 Miles

-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters



Attachment # 2

LD10
No. 10
LOG NAME:ASR
START :11-14 14:10
END :11-14 14:20
INTERVAL:00:01:00

11-14 14:10:00
+6.799E+0 ft/s
+2.400E+3 gal/m
+TOTAL 0000000 gal
NORMAL

11-14 14:11:00
+6.915E+0 ft/s
+2.442E+3 gal/m
+TOTAL 0002474 gal
NORMAL

11-14 14:12:00
+6.977E+0 ft/s
+2.463E+3 gal/m
+TOTAL 0004934 gal
ABNORMAL

11-14 14:13:00
+6.928E+0 ft/s
+2.446E+3 gal/m
+TOTAL 0007211 gal
NORMAL

11-14 14:14:00
+6.734E+0 ft/s
+2.377E+3 gal/m
+TOTAL 0009825 gal
NORMAL

11-14 14:15:00
+6.912E+0 ft/s
+2.440E+3 gal/m
+TOTAL 0012409 gal
NORMAL

11-14 14:16:00
+7.087E+0 ft/s
+2.502E+3 gal/m
+TOTAL 0014867 gal
ABNORMAL

11-14 14:17:00
+6.969E+0 ft/s
+2.460E+3 gal/m
+TOTAL 0017253 gal
NORMAL

11-14 14:19:00
+6.809E+0 ft/s
+2.404E+3 gal/m
+TOTAL 0019612 gal
NORMAL

Attachment #3:**1995 Power Data Aubrey Springs Ranch Well and Recirculation Pump**

Well	Nov 94	Dec 94	Jan 95	Feb 95	Mar 95	Apr 95	May 95	Jun 95	Jul 95
KWH	2902	0	6000	3000	3000	0	12159	3889	4417
Demand	14	0	14	7	7	7	14	7	16
				Tot KWH	Tot Demand	Test Tot KWH			
	Aug 95	Sep 95	Oct 95	46800	116	46800			
KWH	4551	2562	4320						
Demand	16	7	7						

Recirc	Nov 94	Dec 94	Jan 95	Feb 95	Mar 95	Apr 95	May 95	Jun 95	Jul 95
KWH	7821	0	95183	65183	10000	0	24968	10598	12335
Demand	31	0	31	31	15	15	31	47	56
	Aug 95	Sep 95	Oct 95	Tot KWH	Tot Demand	Test Tot KWH			
KWH	15613	9763	9290	130388	309	260754			
Demand	54	15	15						

1996 Power Data Aubrey Springs Ranch Well and Recirculation Pump

Well	Nov 95	Dec 95	Jan 96	Feb 96	Mar 96	Apr 96	May 96	Jun 96	Jul 96
KWH	3938	4067	4298	0	7882	4196	3799	7993	14164
Demand	7	7	7	0	14	7	7	33	75
	Aug 96	Sep 96	Oct 96	Tot KWH	Tot Demand	Test Tot KWH			
KWH	4692	9919	7160	72108	203	72108			
Demand	13	17	16						

Recirc	Nov 95	Dec 95	Jan 96	Feb 96	Mar 96	Apr 96	May 96	Jun 96	Jul 96
KWH	10343	10421	3877	6969	10586	10524	10192	7608	18999
Demand	15	15	15	15	15	15	15	15	59
	Aug 96	Sep 96	Oct 96	Tot KWH	Tot Demand	Test Tot KWH			
KWH	9396	9363	9029	117307	230	117307			
Demand	18	15	18						