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WATER RESOURCES DEPT.
SALEM, OREGON

SITE REPORT

for

CLAIM OF BENEFICIAL USE

Under: Application No. G-12664 & Permit G-11956

In the Name of: Herb Davis & Sons
HC 72 Box 120
Princeton, OR 97721

Location: This irrigation system is located in Sections 19 and 29, T 26 S, R 33 E, WM, Harney County, Oregon.

I. GENERAL INFORMATION

In January of 1996 I conducted a site visit on the subject water right application and permit. Although the system was not in operation this time of year evidence of alfalfa crops and irrigation was noted.

II. IRRIGATION SYSTEM

The irrigation system consists of 2 wells. A 10" p.v.c. transmission line from well no.1 to a Valley Pivot in Section 19 and a 10" alum. transmission line from well no. 2 to a Rain Cat Pivot in Section 29.

Water Source - Water is provided from 2 wells located as described in the Permit and as shown on the Final Proof Map. Information on these wells as provided by the owner and well logs indicate:

Well Data	<u>Well No. 1</u>	<u>Well No. 2</u>
Year Drilled	1955	1950's
Depth	97'	90'
Casing Size/Type	12"/1/4" stl.	12"/1/4" stl.
Casing Depth	32'	40'
Static Water Level	14'	18'
Pumping Level	14'	22'
Pump Setting	40'	60'

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	<u>Well No. 1</u>	<u>Well No. 2</u>
Motor Data		
Make	GE	Newman
Hp	40	25
Rpm	1760	1760

Pump Data -Vertical line shaft turbines

Make	Berkley	Lane
Intake/Outlet	8"/8"	8"/6"

Both wells have a 1.5" dia. g.i.p. access port for water level measurements.

Transmission Pipe - Water from well no. 1 is transmitted thru 1293 ft. of 10" p.v.c. pipe to the irrigation pivot. Water from well no. 2 is transmitted thru 1386 ft. of alum. pipe to the irrigation pivot.

Irrigation Pivot - Well no. 1 pivot is a Valley pivot with 136 Valley sprinkler heads varying in size from 5/64" to 22/64" and a wetted length of 1363 feet. Well no. 2 pivot is a Rain Cat Pivot with 132 Valley sprinkler heads varying in size from 5/16" to 22/64" and a wetted length of 1313 feet.

III. SYSTEM CALCULATIONS

Based on the above information the capacity of the water delivery system is calculated as follows:

Well No. 1

Pumping level	22'
Column losses	10'
Main line losses	5'
Pivot losses	15'
Operating pressure @ 40 psi	92'
Elevation	2'
Total losses	146'

Theoretical capacity of Well No. 1:

$$Q = (HP \times Eff \times 3960) / H =$$

$$Q = (40 \times 0.75 \times 3960) / 146 = 814 \text{ gpm} = 1.81 \text{ cfs}$$

$$\text{Duty of Water} = 1/80 \text{ cfs per acre} = 134.0/80 = 1.675 \text{ cfs}$$

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Well No. 2

Pumping level	30'
Column losses	10'
Main line losses	6'
Pivot losses	10'
Operating pressure @ 20 psi	46'
Elevation losses	0'
Total losses	<u>102'</u>

Theoretical capacity of Well No. 2:

$$Q = (\text{HP} \times \text{Eff} \times 3960) / H =$$

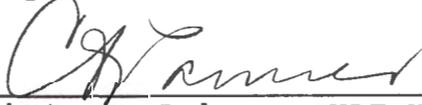
$$Q = (25 \times 0.75 \times 3960) / 102 = 728 \text{ gpm} = 1.62 \text{ cfs}$$

$$\text{Duty of Water} = 1/80 \text{ cfs per acre} = 124.4/80 = 1.555 \text{ cfs}$$

Therefore the well no. 1 will supply 1.675 cfs and well no. 2 will supply 1.555 cfs per Permit No. G-11956.

IV. CERTIFICATION

I, Chris T. Palmer, Certified Water Rights Examiner, registered in accordance with the laws of the State of Oregon, do hereby certify that the final proof site survey and inspection of the use was found to be completed under the terms and conditions of Application No. G-12664 and Permit No. G-11956 and the information contained in this report and accompanying final proof map are correct to the best of my knowledge.


Chris T. Palmer, CWRE No 100

Herb Davis & Sons do hereby agree to the above findings of Chris T. Palmer, Certified Water Rights Examiner, and do submit this site report and map as Claim of Beneficial Use of the water as provided under the terms and conditions of Application No. G-12664 and Permit No. 11956.


Herb Davis & Sons