

**CLAIM OF
BENEFICIAL USE
for Groundwater Permits
claiming more than 0.1 cfs**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

RECEIVED

JUN 16 2022

OWRD

**A fee of \$230 must accompany this form for permits
with priority dates of July 9, 1987, or later.**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

A claim of beneficial use includes both this report and a map. If the map is being mailed separately from this form, please include a note with this form indicating such.

If you have questions regarding the completion of this form, please call 503-979-9103.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see
<https://www.oregon.gov/OWRD/programs/WaterRights/RA/Pages/default.aspx>

SECTION 1

GENERAL INFORMATION

1. File Information:

APPLICATION # G-18276	PERMIT # (IF APPLICABLE) G-17791	PERMIT AMENDMENT # (IF APPLICABLE) T-
---------------------------------	--	---

2. Property Owner (current owner information):

APPLICANT/BUSINESS NAME Justin R. & Jayna L. Ferrell		PHONE NO. 541-219-2698	ADDITIONAL CONTACT NO.
ADDRESS 29261 Abert Rim Rd.			
CITY Lakeview	STATE OR	ZIP 97630	E-MAIL lakecountyswcd@hotmail.com

If the current property owner is not the permit holder of record, it is recommended that an assignment be filed with the Department. ***Each*** permit holder of record must sign this form.

3. Permit holder of record (this may, or may not, be the current property owner):

PERMIT HOLDER OF RECORD Justin R. & Jayna L. Ferrell			
ADDRESS 29261 Abert Rim Rd.			
CITY Lakeview	STATE OR	ZIP 97630	

RECEIVED
JUN 16 2022
OWRD

ADDITIONAL PERMIT HOLDER OF RECORD		
ADDRESS		
CITY	STATE	ZIP

4. Date of Site Inspection:

5-03-2022

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Justin Ferrell	5-3-2022	Owner

6. County:

Lake

7. If any property described in the place of use of the permit is excluded from this report, identify the owner of record for that property (ORS 537.230(5)):

OWNER OF RECORD		
ADDRESS		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

RECEIVED

JUN 16 2022

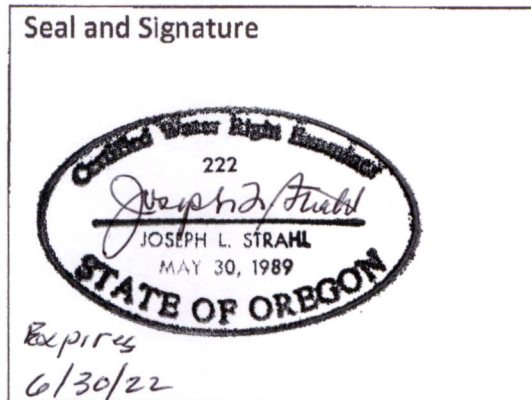
SECTION 2
SIGNATURES

OWRD

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.

Seal and Signature



CWRE NAME Joseph L. Strahl		PHONE NO. 541-301-2946	ADDITIONAL CONTACT NO.
ADDRESS 9300 John Day Drive			
CITY Gold Hill	STATE OR	ZIP 97525	E-MAIL joe4548@gmail.com

Permit Holder of Record Signature or Acknowledgement

Each permit holder of record must sign this form in the space provided below.

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	TITLE	DATE
	Justin R. Ferrell	Owner	6/6/22
	Jayna L. Ferrell	Owner	

JUN 16 2022

SECTION 3

CLAIM DESCRIPTION

OWRD

1. Point of appropriation name or number:

POINT OF APPROPRIATION (POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
Well #3	LAKE 52618	L117168

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

2. Point of appropriation source, if indicated on permit:

POA NAME OR NUMBER	SOURCE BASIN LOCATED WITHIN	TRIBUTARY
Well #3	Crooked Creek Basin	Chewaucan River

3. Developed use(s), period of use, and rate for each use:

POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	ACTUAL RATE OR VOLUME USED (CFS, GPM, OR AF)
Well #3	IR	Grain hay and pasture	March 1 through Oct 31	320 GPM
Total Quantity of Water Used				320 GPM

4. Provide a general narrative description of the distribution works. This description must trace the water system from **each** point of appropriation to the place of use:

Well #3 has a 100 hp pump connected directly to a 10 inch PVC mainline to an existing pivot (Permit G 17528). There is a 6 inch PVC mainline that branches off the 10 inch near the center of the existing pivot. The 6 inch mainline carries water to the pivot subject to this claim. Aluminum (3 inch) handline is used to supply a big gun to irrigate the small pastures.

Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLOT), and Quarter-Quarters (QQ).

5. Variations:

Was the use developed differently from what was authorized by the permit, permit amendment final order, or extension final order? If yes, describe below. Yes

The permit allowed 70.66 acres of irrigation. Acreage developed is 45.94 acres.

6. Claim Summary:

POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
Well #3	0.88 CFS	4.8	NA	IR	70.66	45.94

SECTION 4

SYSTEM DESCRIPTION

Are there multiple POAs?

NO

If "YES" you will need to copy and complete a separate Section 4 for each POA.

POA Name or Number this section describes (only needed if there is more than one):

Well #3

RECEIVED

JUN 16 2022

OWRD

A. Place of Use

1. Is the right for municipal use?

NO

TWP	RNG	MER	SEC	QQ	GLot	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
35 S	21 E	WM	32	SW NE			Irrigation	8.86	
35 S	21 E	WM	32	SE NE			Irrigation	22.84	
35 S	21 E	WM	32	SE SE			Irrigation	1.52	
35 S	21 E	WM	33	SW SW			Irrigation	1.86	
36 S	21 E	WM	4	NW NW			Irrigation	10.86	
Total Acres Irrigated								45.94	

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLot), Quarter Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, GLot, and QQ.

B. Groundwater Source Information (Well)

1. Is the appropriation from a well?

YES

2. Describe the access port (type and location) or other means to measure the water level in the well:

Measuring port is a 1-inch threaded hole in the pump gear head housing on the east side. There is a plastic measuring tube extending approximately 4 feet out of the hole.

3. If well logs are not available, provide as much of the following information as possible:

CASING DIAMETER	CASING DEPTH	TOTAL DEPTH	COMPLETION DATE OF ORIGINAL WELL	COMPLETION DATES OF ALTERATIONS	WHO THE WELL WAS DRILLED FOR	WELL DRILLED BY
See well log						

4. In addition to the information requested in item "3" above, provide any other information which may help the Department locate any well logs associated with this appropriation.

L 117168

C. Groundwater Source Information (Sump)

1. Is the appropriation from a dug well (sump)?

RECEIVED**JUN 16 2022****NO****D. Diversion and Delivery System Information****OWRD**

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of appropriation to the place of use.

1. Is a pump used?

YES**2. Pump Information:**

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Gould Water Technologies	MDL 12 CHC	MG 1590	Turbine	8.6875	8.6875

3. Motor Information:

MANUFACTURER	HORSEPOWER
NIDEC Motor Corp	100

4. Theoretical Pump Capacity:

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *If A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
100	15.5	163	-45'	3.48 CFS

5. Provide pump calculations:

See attached pump calculation sheet

6. Measured Pump Capacity (using meter if meter was present and system was operating):

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
NA			

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped?

YES

8. Mainline Information:

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
10"	15'	Steel	Above ground
10"	2526'	PVC	Buried
6"	1410'	PVC	Buried

RECEIVED

JUN 16 2022

OWRD

9. Lateral or Handline Information:

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
3"	600	Aluminum	Above ground

10. Sprinkler Information:

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)
0.65"	40	78	1	1	0.17

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Drip Emmitter Information:

SIZE	OPERATING PSI	EMITTER OUTPUT (GPM)	TOTAL NUMBER OF EMITTERS	MAXIMUM NUMBER USED	TOTAL EMITTER OUTPUT (CFS)
NA					

12. Drip Tape Information:

DRIPPER SPACING IN INCHES	GPM PER 100 FEET	TOTAL LENGTH OF TAPE	MAXIMUM LENGTH OF TAPE USED	TOTAL TAPE OUTPUT (CFS)	ADDITIONAL INFORMATION
NA					

13. Pivot Information:

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)
Zimmatic	935.1	45	300	0.67

E. Storage

1. Does the distribution system include in-system storage (e.g. storage tank, bulge in system / reservoir)?

NO

If "NO", item 2 and 3 relating to this section may be deleted.

RECEIVED

F. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

JUN 16 2022

1. Does the system involve a gravity flow pipe?

OWRD

NO

If "NO", items 2 through 4 relating to this section may be deleted.

G. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

NO

If "NO", items 2 through 4 relating to this section may be deleted.

H. Additional notes or comments related to the system:

Well #3 also provides water for water right by Permit G-17528. Total demand on the well for both systems in operation is 3.07 CFS.

JUN 16 2022

SECTION 5 CONDITIONS

OWRD

All conditions contained in the permit, permit amendment, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits and extension final orders contain any or all of the following dates: the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit or permit extension order:

	DATE FROM PERMIT	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	7-06-2017		
BEGIN CONSTRUCTION (A)			
COMPLETE CONSTRUCTION (B)	7-06-2022		
COMPLETE APPLICATION OF WATER (C)	7-22-2022	April 2022	Install 6 inch pipeline and pivot. Install valve in 10" mainline to supply 3" handline for the big gun

* MUST BE WITHIN PERIOD BETWEEN PERMIT, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)? NO

3. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement? YES

b. What month was the initial measurement to be taken in?

March

c. Was the measurement submitted to the Department? YES

d. If the initial measurement was not submitted, provide that measurement now, if available:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT

4. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements? YES

b. Provide the month, or months, the static water level measurement(s) were to be made:

March

c. Were the static water level measurements taken in the month(s) required? YES

d. If "YES", were those measurements submitted to the Department? YES

e. If the annual measurements were not submitted, provide the measurements now:

DATE OF MEASUREMENT	MEASUREMENT MADE BY	METHOD	MEASUREMENT

5. Pump Test:

a. Did the permit require the submittal of a pump test? YES

Ground water permits with priority dates on or after **December 20, 1988**, require the submittal of a pump test prior to issuance of a certificate. In some cases, the permit holder may qualify for a multiple well exemption or an unreasonable burden exemption.

For additional information regarding pump tests see:

<https://www.oregon.gov/OWRD/programs/GWWL/GW/Pages/PumpTestProgram.aspx>

RECEIVED

JUN 16 2022

OWRD

b. Has the pump test been previously submitted to the Department? YES

c. Is the pump test attached to this claim? YES

d. Has the pump test been approved by the Department? YES

e. Has a pump test exemption been approved by the Department? NO

** Claims will not be reviewed until a pump test or exemption has been approved by the Department

6. Measurement Conditions:

a. Does the permit, permit amendment, or any extension final order require the installation of a meter or approved measuring device? YES

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion or appropriation.

b. Has a meter been installed? YES

c. Meter Information

POD/POA NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
Well #3	McCrometer	21-06361	Working	0.001	May 15, 2022

7. Recording and reporting conditions:

a. Is the water user required to report the water use to the Department? YES

b. Have the reports been submitted? YES

If the reports have not been submitted, attach a copy of the reports if available.

8. Other conditions required by permit, permit amendment final order, or extension final order:

a. Were there special well construction standards? YES

b. Was submittal of a ground water monitoring plan required? NO

c. Was submittal of a water management and conservation plan required? NO

d. Was a Well Identification Number (Well ID tag) assigned and attached to the well? YES

RECEIVED**JUN 16 2022****OWRD****NO**

WELL ID #	DATE ATTACHED TO WELL
L-117168	May 2015

e. Other conditions?

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

The permit required "...shall obtain groundwater solely from the predominantly basalt unit...". The water is taken from the 90 foot depth to 398 foot depth. The well log indicates this zone consists of various layers of "shattered" and "fractured" basalt.

Well #3 of this Claim is also the POA for Permit G-17528. A pump test for well L-117168 was approved by Gerald Grondin on 1/13/2022.

SECTION 6

ATTACHMENTS

Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION
Claim of Beneficial Use Map	
LAKE 52618	Well log
Pump Capacity Calculation Sheet	
Pipe Capacity Calculator	
Valley V-Chart	the paperwork for the nozzles and designed application rate of the pivot installed
Pump Test	

SECTION 7

CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

We use ArcView 10.8.1 mapping. The Lake County tax lot GIS layer is used for property lines. The Oregon Geospatial Library data is used for the PLSS section and quarter quarter GIS data. Measurements were made on the ESRI aerial World Imagery layer dated 7/20/2020. Accuracy of the aerial imagery was verified using the OnX Hunt GPS function on a smart phone.

RECEIVED

JUN 16 2022

OWRD

RECEIVED

JUN 16 2022

OWRD

Map Checklist

Please be sure that the map you submit includes ALL the items listed below.

(Reminder: Incomplete maps and/or claims may be returned.)

- ☒ Map on polyester film
- ☒ Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- ☒ Township, Range, Section, Donation Land Claims, and Government Lots
- ☒ If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- ☒ Locations of fish screens and/or fish by-pass devices in relationship to point of diversion
- ☒ Locations of meters and/or measuring devices in relationship to point of diversion or appropriation
- ☒ Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- ☒ Point(s) of diversion or appropriation (illustrated and coordinates)
- ☒ Tax lot boundaries and numbers
- ☒ Source illustrated if surface water
- ☒ Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- ☒ Application and permit number or transfer number
- ☒ North arrow
- ☒ Legend
- ☒ CWRE stamp and signature

STATE OF OREGON
WATER SUPPLY WELL REPORT
 (as required by ORS 537.765 & OAR 690-205-0210)

LAKE 52618

5/19/2015

WELL I.D. LABEL# L 117168

START CARD # 1025777

ORIGINAL LOG #

(1) LAND OWNER

Owner Well I.D. _____
 First Name JUSTIN Last Name FERRELL
 Company _____
 Address 29261 ABERT RIM RD.
 City LAKEVIEW State OR Zip 97630

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Conversion
☐ Alteration (complete 2a & 10) ☐ Abandonment (complete 5a)

(2a) PRE-ALTERATION

Casing: Dia + From To Gauge Stl Plstc Wld Thrd
 Material From To Amt sacks/lbs
 Seal: _____

(3) DRILL METHOD

☐ Rotary Air ☒ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Community
☐ Industrial/ Commercial ☐ Livestock ☐ Dewatering
☐ Thermal ☐ Injection ☐ Other _____

(5) BORE HOLE CONSTRUCTIONSpecial Standard ☐ (Attach copy)Depth of Completed Well 427.00 ft.

BORE HOLE			SEAL			sacks/	
Dia	From	To	Material	From	To	Amt	lbs
24	0	90	Bentonite Chips	0	90	275	S
22	90	398				Calculated	270
12	398	427				Calculated	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other POURED DRY

Backfill placed from _____ ft. to _____ ft. Material _____

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: ☐ Yes Type _____ Amount _____**(5a) ABANDONMENT USING UNHYDRATED BENTONITE**

Proposed Amount _____ Actual Amount _____

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
☒	☐	16	☒	2	238	.250	☒	☐	☒	☐
☐	☐	16	☐	238	398	.375	☐	☐	☒	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____Temp casing ☐ Yes Dia _____ From _____ To _____**(7) PERFORATIONS/SCREENS**Perforations Method plasma cutter

Screens Type _____ Material _____

Perf/	Casing/	Screen	Dia	From	To	Scr/slot	Slot	# of	Tele/
Screen	Liner					width	length	slots	pipe size
Perf	Casing	16	198	238	.125	3	1292		
Perf	Casing	16	268	398	.125	3	4199		

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____

800		200	2
-----	--	-----	---

Temperature 58 °F Lab analysis ☐ Yes By _____Water quality concerns? ☐ Yes (describe below) TDS amount 139 ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County LAKE Twp 36.00 S N/S Range 21.00 E E/W WM
 Sec 4 NE 1/4 of the NW 1/4 Tax Lot 400
 Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD
 Long _____ " or _____ DMS or DD

☐ Street address of well ☒ Nearest address

29261 ABERT RIM RD.
LAKEVIEW

(10) STATIC WATER LEVEL

Existing Well / Pre-Alteration	Date	SWL(psi)	+	SWL(ft)
Completed Well	5/1/2015			63

Flowing Artesian? ☐ Dry Hole? ☐**WATER BEARING ZONES**Depth water was first found 120.00

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
5/1/2015	120	403	800			63

(11) WELL LOG

Ground Elevation _____

Material	From	To
sandy soil with basalt boulders	0	8
broken basalt with cinders	8	17
cinders	17	21
shattered basalt with cinders	21	52
fractured basalt	52	73
basalt	73	94
shattered basalt	94	126
coarse black sand with shattered basalt	126	192
fractured basalt	192	237
fractured grey sandstone with basalt	237	254
fractured basalt	254	315
shattered basalt with cinders	315	403
grey sandy clay	403	427

Date Started 3/16/2015 Completed 5/1/2015**(unbonded) Water Well Constructor Certification**

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number 1940Date 5/19/2015Signed BENJAMIN FRY (E-filed)**(bonded) Water Well Constructor Certification**

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1355Date 5/19/2015Signed ARTHUR L FRY (E-filed)

Contact Info (optional) _____

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK Form Version:

Pump Capacity Calculation Sheet

using Department designed formula:

$(hp)(\text{efficiency}) / (\text{lift} + \text{psi head}) = \text{capacity in cfs}$

Efficiency:

Centrifugal = 6.61

Turbine = 7.04

Data Entry (fill in underlined blanks)

HP = 100
Efficiency = 7.04
Lift = 163
PSI = 15.5

Results Calculated

(hp)(efficiency) = 704
Head based on psi = 39.4
Total dynamic head = 202.4
(head + lift)

Pump Capacity = 3.48 feet per second

RECEIVED

JUN 16 2022

OWRD

Pipe Capacity Calculator

for pipes flowing full, using the Hazen-Williams Formula

Data Entry (fill in underlined blanks)

Interior Diameter = 10 inches, or 0.833333 feet
Roughness Coefficient (C) = 140
Fall = 57 feet per 2536 feet of distance
Grade = 0.02247634 , or 2.2%

Results calculated

Area of cross-section = 0.54542 square feet
Wetted Perimeter = 2.61799 feet
Hydraulic Radius = 0.20833
Velocity = 8.84694 feet per second

Pipe Capacity = 4.825 cubic feet per second

RECEIVED
JUN 16 2022
OWRD



RECEIVED

JUN 16 2022

OWRD

Valley Dealer

J.W. KERNS-CHRISTMAS VALLEY

87226 Christmas Valley Hwy

PO Box 822

ChristmasValley, OR 97641

United States

Customer

Justin Ferrill

29261 Albert Rim Rd

LakeView, OR 97630-9174

US

Dealer No.

00903766

Field Name

NorthHalfCircle

Parent Order No.
Sprinkler Order No. **15034038**

Plant **IDAHO DC**

Dealer PO **JC31022Z**
Order Date **04/07/2022**
Load Date **04/11/2022**
Method Of Shipment **UPSG**

5 Span Zimmatic Standard Pivot 510&507
Machine Flow 300 (GPM)
Pivot Pressure 45 (PSI)

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038****RECEIVED**Customer **Justin Ferrill**Field Name **NorthHalfCircle****JUN 16 2022****Zimmatic Standard Pivot 510&507 Machine Summary****OWRD**

Span and Overhang

Model	Qty	Length (ft)	Pipe O.D. (in)	Coupler Spacing (in)	D. U. Qty Profile Tire
510&507	5	171.0	5 9/16	104	20 Standard 11.2 x 24 New
zim	1	40.0	3.79	120	4

Field Area

31.5 (Ac) Total
29.0 (Ac) Pivot 180°
2.6 (Ac) EG on 100%
896.5 (ft) Machine Length
38.6 (ft) End Gun Radius

Flow

300 (GPM)
9.51 (GPM per Acre)
0.50 (in per day) App Rate
0.103 (in) App Depth @ 100%
30.5 (GPM) End Gun

Messages

Caution:

1. Endgun pressure is greater than the manufacturers recommen maximum pressure. Endgun performance may not meet customer expectations.
2. Primary Endgun overwatering by 25.53%
3. Endgun - The R55 model has been discontinued. Use for renozzle only. Replacement model is R55 VT.

Dealer:**jake**

Pressure

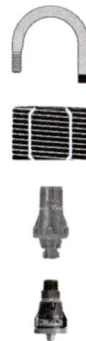
45 (PSI) Pivot Pressure
Inlet Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

43 RPM Center Drive @60 Hz freq.
11.2 x 24 New Tire
50:1 Wheel GB Ratio, LRDU Dist 856.5 (ft)
4.9 Hrs/180° @ 100% 9.10 (Ft per Min)
9.8 Hrs/360° @ 100%

Sprinkler -- Computer Spacing

<u>Sprinkler Configuration</u>	<u>Range(ft)</u>
Valley U-Pipe 6(in) Galvanized 3/4 M NPT x 3/4 M Hose	All
Black Hose Drop Variable Length 60(in) Ground Clr	
Nelson Regulator Blue Acme 20(PSI) 3/4 F NPT	
Valley Slip Weight 26(in) 2(lb) Poly	
Nelson R3000 D4 - Green 3/4 F Acme ASSY	


470.80 (ft) Total Drop Hose Length

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038**Customer **Justin Ferrill**Field Name **NorthHalfCircle****Zimmatic Standard Pivot 510&507 Machine Summary****RECEIVED****JUN 16 2022****OWRD**

Pressure Loss

Pipe Length (ft)	Pipe I.D. (in)	Pipe Finish	C-Factor	Loss (PSI)
856.5	5.32	Galvanized	140	2.3
40.0	3.79		150	0.6
Total =				2.9

End Gun(s) & Booster Pump Information

	<u>Primary End Gun</u>
	Nelson R55 End Gun
	# 52 Nozzle
	Booster Pump

Span Flow

Span Number	Irrigated Length (ft)	Area (Ac)	Rqd (GPM)	Act (GPM)	Rqd (GPM per Acre)	Act (GPM per Acre)	% Deviation
1	171.0	1.1	9.7	18.3	8.99	17.04	89.5
2	171.0	3.2	28.6	28.6	8.99	8.99	-0.0
3	171.0	5.3	47.6	47.6	8.99	9.00	0.1
4	171.0	7.4	66.6	66.7	8.99	9.01	0.2
5	171.0	9.5	85.5	85.3	8.99	8.97	-0.2
O/H	40.0	2.5	23.3	23.2	9.22	9.17	-0.6
EG	38.6	2.6	24.3	30.5	9.51	11.94	25.5
Totals		31.6		300.2			
Drain Sprinkler			0	0			
Total Machine Flow				300.2			

Advanced Options

Last Sprinkler Coverage = 1 ft
 Sprinkler Coverage Length = 897.5 ft
 Use Last Coupler= YES
 Minimum Mainline Pressure = 6 PSI

Shipping Options

Do not ship Drop Hardware
 Ship Endgun Nozzle
 Do not ship Endgun & Hardware
 Do not ship Endgun Valve / Nozzle Valve Hardware
 Do not ship Boosterpump Hardware

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038**Customer **Justin Ferrill**Field Name **NorthHalfCircle****Zimmatic Standard Pivot 510&507 Machine Sprinkler Chart**

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
1	6.1			Gauge									
2	14.7			Plug									
3	23.4			Plug									
Sprinkler : Nelson Rotator Assembly													
4	32.1	1		16	Lavender	R3000	D4 - Green	112	Blue Acme 20L	44.3	22.7	0.5	2.1
5	40.7			Plug									
6	49.2	2	17.1	16	Lavender	R3000	D4 - Green	120	Blue Acme 20L	43.9	22.7	0.5	2.1
7	57.6			Plug									
8	66.0	3	16.8	16	Lavender	R3000	D4 - Green	124	Blue Acme 20L	43.7	22.6	0.7	2.1
9	74.4			Plug									
10	82.8	4	16.8	16	Lavender	R3000	D4 - Green	125	Blue Acme 20L	43.5	22.5	0.9	2.1
11	91.2			Plug									
12	99.6	5	16.8	16	Lavender	R3000	D4 - Green	124	Blue Acme 20L	43.5	22.4	1.1	2.1
13	108.0			Plug									
14	116.4	6	16.8	16	Lavender	R3000	D4 - Green	120	Blue Acme 20L	43.6	22.3	1.3	2.1
15	124.9			Plug									
16	133.3	7	16.8	16	Lavender	R3000	D4 - Green	113	Blue Acme 20L	43.7	22.2	1.5	2.1
17	141.9			Plug									
18	150.6	8	17.3	16	Lavender	R3000	D4 - Green	103	Blue Acme 20L	44.0	22.1	1.7	2.1
19	159.3			Plug									
20	168.0	9	17.3	16	Lavender	R3000	D4 - Green	90	Blue Acme 20L	44.4	22.0	1.9	2.1
	172.5			Tower Number : 1 Span Length(ft) : 171.0									
21	177.1			Plug									
22	185.7	10	17.8	16	Lavender	R3000	D4 - Green	97	Blue Acme 20L	44.1	21.9	2.1	2.1
23	194.4			Plug									
24	203.1	11	17.3	17	Lavender/Gray	R3000	D4 - Green	107	Blue Acme 20L	43.6	21.8	2.3	2.3
25	211.7			Plug									
26	220.2	12	17.1	17	Lavender/Gray	R3000	D4 - Green	115	Blue Acme 20L	43.2	21.8	2.4	2.3
27	228.6			Plug									
28	237.0	13	16.8	18	Gray	R3000	D4 - Green	120	Blue Acme 20L	43.0	21.6	2.6	2.6

RECEIVED

JUN 16 2022

OWRD

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038****RECEIVED**Customer **Justin Ferrill****JUN 16 2022**Field Name **NorthHalfCircle****Zimmatic Standard Pivot 510&507 Machine Sprinkler Chart****OWRD**

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
29	245.4			Plug									
30	253.8	14	16.8	19	Gray/Turquoise	R3000	D4 - Green	122	Blue Acme 20L	42.8	21.6	2.8	2.9
31	262.2			Plug									
32	270.6	15	16.8	19	Gray/Turquoise	R3000	D4 - Green	122	Blue Acme 20L	42.8	21.5	2.9	2.9
33	279.0			Plug									
34	287.4	16	16.8	20	Turquoise	R3000	D4 - Green	118	Blue Acme 20L	42.8	21.4	3.1	3.2
35	295.9			Plug									
36	304.3	17	16.8	21	Turq/Yellow	R3000	D4 - Green	112	Blue Acme 20L	43.0	21.3	3.4	3.5
37	312.9			Plug									
38	321.6	18	17.3	21	Turq/Yellow	R3000	D4 - Green	102	Blue Acme 20L	43.2	21.2	3.6	3.5
39	330.3			Plug									
40	339.0	19	17.3	22	Yellow	R3000	D4 - Green	90	Blue Acme 20L	43.6	21.0	3.9	3.8
	343.5												
Tower Number : 2 Span Length(ft) : 171.0													
41	348.1			Plug									
42	356.7	20	17.8	23	Yellow/Red	R3000	D4 - Green	97	Blue Acme 20L	43.3	21.0	4.1	4.1
43	365.4			Plug									
44	374.1	21	17.3	23	Yellow/Red	R3000	D4 - Green	107	Blue Acme 20L	42.9	20.9	4.2	4.1
45	382.7			Plug									
46	391.2	22	17.1	23	Yellow/Red	R3000	D4 - Green	115	Blue Acme 20L	42.5	20.9	4.3	4.1
47	399.6			Plug									
48	408.0	23	16.8	24	Red	R3000	D4 - Green	120	Blue Acme 20L	42.3	20.9	4.5	4.6
49	416.4			Plug									
50	424.8	24	16.8	24	Red	R3000	D4 - Green	122	Blue Acme 20L	42.1	20.9	4.6	4.6
51	433.2			Plug									
52	441.6	25	16.8	25	Red/White	R3000	D4 - Green	122	Blue Acme 20L	42.1	20.8	4.8	4.9
53	450.0			Plug									
54	458.4	26	16.8	25	Red/White	R3000	D4 - Green	118	Blue Acme 20L	42.2	20.8	5.0	4.9
55	466.9			Plug									
56	475.3	27	16.8	26	White	R3000	D4 - Green	112	Blue Acme 20L	42.4	20.7	5.3	5.3
57	483.9			Plug									
58	492.6	28	17.3	27	White/Blue	R3000	D4 - Green	102	Blue Acme 20L	42.6	20.7	5.5	5.7
59	501.3			Plug									
60	510.0	29	17.3	27	White/Blue	R3000	D4 - Green	90	Blue Acme 20L	43.0	20.6	5.8	5.7

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038****RECEIVED**Customer **Justin Ferrill**Field Name **NorthHalfCircle****JUN 16 2022****Zimmatic Standard Pivot 510&507 Machine Sprinkler Chart**

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Flow (GPM)	Flow (GPM)
514.5		Tower Number : 3		Span Length(ft) : 171.0									
61	519.1			Plug									
62	527.7	30	17.8	28	Blue	R3000	D4 - Green	97	Blue Acme 20L	42.8	20.6	6.0	6.2
63	536.4			Plug									
64	545.1	31	17.3	28	Blue	R3000	D4 - Green	107	Blue Acme 20L	42.3	20.6	6.1	6.2
65	553.7			Plug									
66	562.2	32	17.1	28	Blue	R3000	D4 - Green	115	Blue Acme 20L	42.0	20.6	6.2	6.2
67	570.6			Plug									
68	579.0	33	16.8	28	Blue	R3000	D4 - Green	120	Blue Acme 20L	41.8	20.6	6.3	6.2
69	587.4			Plug									
70	595.8	34	16.8	28	Blue	R3000	D4 - Green	122	Blue Acme 20L	41.7	20.5	6.5	6.2
71	604.2			Plug									
72	612.6	35	16.8	29	Blue/Dark Brown	R3000	D4 - Green	122	Blue Acme 20L	41.7	20.5	6.7	6.6
73	621.0			Plug									
74	629.4	36	16.8	30	Dark Brown	R3000	D4 - Green	118	Blue Acme 20L	41.8	20.4	6.9	7.1
75	637.9			Plug									
76	646.3	37	16.8	30	Dark Brown	R3000	D4 - Green	112	Blue Acme 20L	42.0	20.4	7.2	7.1
77	654.9			Plug									
78	663.6	38	17.3	31	Dk Brown/Orange	R3000	D4 - Green	102	Blue Acme 20L	42.3	20.3	7.5	7.5
79	672.3			Plug									
80	681.0	39	17.3	32	Orange	R3000	D4 - Green	90	Blue Acme 20L	42.7	20.3	7.8	8.0
685.5		Tower Number : 4		Span Length(ft) : 171.0									
81	690.1			Plug									
82	698.7	40	17.8	32	Orange	R3000	D4 - Green	97	Blue Acme 20L	42.4	20.3	8.0	8.0
83	707.4			Plug									
84	716.1	41	17.3	32	Orange	R3000	D4 - Green	107	Blue Acme 20L	42.0	20.3	8.0	8.0
85	724.7			Plug									
86	733.2	42	17.1	32	Orange	R3000	D4 - Green	115	Blue Acme 20L	41.7	20.2	8.1	8.0
87	741.6			Plug									
88	750.0	43	16.8	32	Orange	R3000	D4 - Green	120	Blue Acme 20L	41.5	20.2	8.2	8.0
89	758.4			Plug									
90	766.8	44	16.8	33	Orange/Dk Green	R3000	D4 - Green	122	Blue Acme 20L	41.5	20.2	8.4	8.5
91	775.2			Plug									

Parent Order No

Dealer **J.W. KERNS-CHRISTMAS VALLEY**Sprinkler Order No **15034038****JUN 16 2022**Customer **Justin Ferrill**Field Name **NorthHalfCircle****OWRD****Zimmatic Standard Pivot 510&507 Machine Sprinkler Chart**

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
92	783.6	45	16.8	33	Orange/Dk Green	R3000	D4 - Green	122	Blue Acme 20L	41.5	20.2	8.5	8.5
93	792.0			Plug									
94	800.4	46	16.8	33	Orange/Dk Green	R3000	D4 - Green	118	Blue Acme 20L	41.6	20.2	8.7	8.5
95	808.9			Plug									
96	817.3	47	16.8	34	Dark Green	R3000	D4 - Green	112	Blue Acme 20L	41.8	20.2	9.1	9.1
97	825.9			Plug									
98	834.6	48	17.3	35	Dk Green/Purple	R3000	D4 - Green	102	Blue Acme 20L	42.1	20.1	9.4	9.5
99	843.3			Plug									
100	852.0	49	17.3	36	Purple	R3000	D4 - Green	90	Blue Acme 20L	42.6	20.1	10.2	10.0
	856.5				Tower Number : 5	Span Length(ft) : 171.0							
101	861.5			Plug									
102	871.5	50	19.6	38	Black	R3000	D4 - Green	94	Blue Acme 20L	42.4	20.0	11.2	11.3
103	881.5			Plug									
104	891.5	51	20.0	34	Dark Green	R3000	D4 - Green	103	Blue Acme 20L	42.1	20.1	9.2	9.0
	896.5				Overhang	Span Length(ft) : 40.0							
Sprinkler : Nelson End of Pivot Sprinkler 													
105	896.5	52		# 52	Purple Snap Fit	R55				42.0	41.9	24.3	30.5

Primary Endgun Arc Settings: Forward Angle: **90** Reverse Angle: **90**

300.2

JUN 16 2022

Dealer **J.W. KERNS-CHRISTMAS VALLEY**
 Customer **Justin Ferrill**
 Field Name **NorthHalfCircle**

Sprinkler Order No **15034038**

Parent Order No

OWRD

Zimmatic Standard Pivot 510&507 Percent Timer Data**Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.103 (in)****Hours/360° = 9.8****Based on IN**

<u>IN Per</u> <u>180 degrees</u>	<u>Pivot</u> <u>% Timer</u>	<u>Hours Per</u> <u>180 degrees</u>
0.103	100.0	4.9
0.20	51.5	9.5
0.30	34.3	14.3
0.40	25.8	19.0
0.50	20.6	23.8
0.60	17.2	28.5
0.70	14.7	33.3
0.80	12.9	38.0
0.90	11.4	43.0
1.00	10.3	47.6
1.25	8.2	59.8
1.50	6.9	71.0
1.75	5.9	83.1
2.00	5.2	94.2

Based on % Timer

<u>Pivot</u> <u>% Timer</u>	<u>IN Per</u> <u>180 degrees</u>	<u>Hours Per</u> <u>180 degrees</u>
100.0	0.103	4.9
90.0	0.11	5.4
80.0	0.13	6.1
70.0	0.15	7.0
60.0	0.17	8.2
50.0	0.21	9.8
45.0	0.23	10.9
40.0	0.26	12.3
35.0	0.29	14.0
30.0	0.34	16.3
25.0	0.41	19.6
20.0	0.52	24.5
17.5	0.59	28.0
15.0	0.69	32.7
12.5	0.82	39.2
10.0	1.03	49.0
7.5	1.37	65.3
5.0	2.06	98.0

Field Area

31.5 (Ac) Total
29.0 (Ac) Pivot 180°
2.6 (Ac) EG on 100%
896.5 (ft) Machine Length
38.6 (ft) End Gun Radius

Flow

300 (GPM)
9.51 (GPM per Acre)
0.50 (in per day) App Rate
0.103 (in) App Depth @ 100%
30.5 (GPM) End Gun

Pressure

45 (PSI) Pivot Pressure
Inlet Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

43 RPM Center Drive @ 60 Hz freq.
11.2 x 24 New Tire
50:1 Wheel GB Ratio, LRDU Dist 856.5 (ft)
4.9 Hrs/180° @ 100% (9.10) (Ft per Min)
9.8 Hrs/360° @ 100%

Disclaimer

The information presented in the attached Percent Timer Report is based on variables which cannot be totally controlled by Valmont (including, but not limited to; pivot pressure, inside pipeline surface, end gun throw, end gun arc setting, tire slippage, tire pressure, field slopes, soil variations, sprinkler package installation, well capacity, center drive motor voltage, center drive motor frequency, climatic conditions and other elements and circumstances beyond Valmont's reasonable control). Valmont recommends monitoring the machine for at least one pass through field to obtain an accurate rotation time.

JUN 16 2022

100 SERIES

OWRD

■ TAPER BORE NOZZLE: 24° Trajectory

Pressure PSI	0.5 in 12.7 mm		0.55 in 14.0 mm		0.6 in 15.2 mm		0.65 in 16.5 mm		0.7 in 17.8 mm		0.75 in 19.1 mm		0.8 in 20.3 mm		0.85 in 21.6 mm		0.9 in 22.9 mm		1 in 25.4 mm	
	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)
40	47	96	57	101	66	107	78	111	91	115	103	120	118	125	134	128	152	131	-	-
50	50	103	64	108	74	113	87	118	100	123	115	128	130	133	150	137	165	140	204	150
60	55	108	69	114	81	120	96	125	110	130	126	135	143	140	164	144	182	148	224	158
70	60	113	75	119	88	125	103	132	120	138	136	142	155	148	177	151	197	155	243	169
80	64	118	79	124	94	130	110	137	128	143	146	148	165	153	189	157	210	163	258	177
90	68	123	83	129	100	135	117	142	135	148	155	153	175	158	201	163	223	168	274	181
100	72	128	87	134	106	140	123	147	143	153	163	158	185	163	212	168	235	173	289	186
110	76	133	92	139	111	145	129	152	150	158	171	162	195	168	222	172	247	178	304	190

■ TAPER RING NOZZLE: 24° Trajectory

Pressure PSI	0.50 in 12.7 mm		0.55 in 14.0 mm		0.63 in 16.0 mm		0.67 in 17.0 mm		0.71 in 18.0 mm		0.75 in 19.0 mm		0.79 in 20.0 mm		0.83 in 21.0 mm		0.87 in 22.0 mm		0.91 in 23.0 mm		0.94 in 24.0 mm	
	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)
40	43	94	53	98	67	106	76	110	86	113	98	117	110	121	125	125	136	127	151	130	166	138
50	48	99	59	105	75	112	85	116	97	120	110	125	123	129	139	133	152	136	169	140	185	144
60	53	107	65	112	83	120	94	123	106	127	120	132	135	137	153	141	167	143	186	147	203	152
70	57	111	70	117	89	125	101	130	114	134	130	139	146	143	165	148	180	150	200	155	219	160
80	61	114	75	121	95	130	108	135	122	139	139	144	156	149	176	153	193	157	214	162	235	168
90	65	119	80	125	101	134	115	139	130	145	147	150	166	154	187	159	204	162	227	167	249	173
100	69	124	84	130	107	139	121	144	137	149	155	154	175	159	197	164	216	167	240	172	262	178
110	72	129	88	135	112	144	127	149	143	154	163	159	183	163	207	168	226	171	251	177	275	182

■ RING NOZZLE: 24° Trajectory

Pressure PSI	0.604 in 15.3 mm		0.71 in 18.0 mm		0.77 in 19.6 mm		0.81 in 20.6 mm		0.86 in 21.8 mm		0.89 in 22.6 mm		0.93 in 23.6 mm		0.96 in 24.4 mm	
	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)	gpm	Rad. (ft)
40	47	93	66	104	78	106	91	108	103	112	118	118	134	119	152	121
50	52	100	74	110	88	113	100	115	115	120	129	125	150	128	167	130
60	57	105	81	118	96	120	110	123	125	130	141	135	164	138	183	140
70	61	110	88	123	104	125	118	130	135	138	152	145	177	148	198	150
80	65	115	94	128	111	133	127	138	145	143	163	150	189	153	211	158
90	69	120	99	133	117	138	134	143	154	148	173	155	201	158	224	163
100	72	123	105	135	124	140	142	148	162	153	182	160	212	163	236	168
110	75	125	110	138	130	145	149	153	170	158	191	163	222	168	248	173



OREGON
WATER
RESOURCES
DEPARTMENT

RECEIVED

JUN 16 2022

OWRD

PUMP TEST FORM
COVER SHEET

Owner Information:

OWNER NAME/BUSINESS NAME: Justin and Jayna Ferrell		PHONE NO.: 541-219-2698	ADDITIONAL CONTACT NO.:
ADDRESS: 29261 Abert Rim rd			
CITY: Lakeview	STATE: OR	ZIP: 97630	E-MAIL: lakecountyswcd@hotmail.com

Pump Test Conducted By (If Different From Owner):

TEST CONDUCTED BY NAME:	QUALIFICATION: (SELECT)	LICENSE #:
COMPANY:	PHONE NO.:	ADDITIONAL CONTACT NO.:
ADDRESS:		
CITY:	STATE:	ZIP:
E-MAIL:		

Tested Well Information (please attach well log(s) if available):

WELL LOG # (EX: MARI 99999)	WELL TAG # (EX: L-999999)	WELL NAME OR #	WELL DEPTH	ORIGINAL OWNER	DATE DRILLED	TEST DATE
	L- 117168	Schofield Pivot	427ft	Justin Ferrell	5/19/15	4/21/2020

(CONTINUED)

TWP (EX: 25S)	RNG (EX: 31E)	SEC (EX: 12)	QQ (EX: SE/SW)	SURVEYED LOCATION (EX: 100 ft N & 735 ft E fr SE cor, sec 5)	LATITUDE (EX: 44.94473859)	LONGITUDE (EX: -123.02787000)
36s	21e	4	nw/nw	230 ft south and 1053 ft east from ne corner section 4		

List all water rights for which you are submitting this test. Please indicate if the tested well is listed as an authorized source of water on each water right. If not, you may also need to fill out a multiple well exemption (MWE) request form.

APPLICATION	PERMIT	TRANSFER	CERTIFICATE	IS THE TESTED WELL AN AUTHORIZED POA ON THIS RIGHT?
G-17548	G-17528	T- 12076		☒ Yes ☐ No (Need MWE Form)
G-	G-	T-		☐ Yes ☒ No (Need MWE Form)
G-	G-	T-		☐ Yes ☒ No (Need MWE Form)

Nearby Wells and Streams: Please check yes or no. Do not leave blank.

☒ Are there any wells, other than domestic or stock wells, within 1000 feet of the tested well?
If yes, identify the well by OWRD log number or attach a copy of the well log. Note the approximate distance to each well from the tested well and the approximate pumping rate of each.
If possible, indicate if they were turned on or off during the test or within 24 hours prior to the test (Indicate Not Pumped, if applicable).

WELL LOG # (EX: MARI 99999)	BEARING & DISTANCE FROM PUMPED WELL (FT)	DATE & TIME PUMP ON	DATE & TIME PUMP OFF	PUMPING RATE (GPM)

☐ Is there a lake, stream or other surface water body within 1/4 mile of the tested well?
If yes, give approximate distance from the well and approximate elevation difference between the surface water and the well head.
Well elevation is above the surface water body. Approximate distance: _____ ft.
Approximate elevation difference: _____ ft.

☒ Was the test conducted during normal use of the well?
Please indicate where pumped water was discharged: on hay field via center pivot
How far from the pumped well was water discharged? 2700ft _____ ft.

Additional forms can be found at: <https://www.oregon.gov/owrd/Forms/Pages/default.aspx>.

OWRD20200115

PUMP TEST FORM COVER SHEET

Water-Level Measurement Method: Electric Tape ☒

Length of air line (if used): _____

*Verify here: { Airline: _____ psi _____ feet.
E-Tape: 500 _____ feet.

*Airline measurements must be verified by an E-Tape measurement

Pressure transducer (if used):

Manufacturer: _____ Serial #: _____

Date Last Calibrated: _____ Units: _____

Pump Type: Turbine ☒

HP: 100 Pump set at: 330 feet.

Pump idle time: 72 hrs

Discharge Measurement Method: Flowmeter ☒

Flowmeter (if used):

Manufacturer: McCrometer Serial #: 15-07665-10

Date Last Calibrated: 4/2016 Units: GPM

Note: Well must be idle for at least 16 hours prior to the test. Additional forms can be obtained from our web site at:
<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

Measuring Point (MP): Measuring point distance above land surface 1 feet.

Description (e.g., top port of 1 inch port pipe, west side) Measuring port on east side of well

Time pump turned on: Date 4/21/2020 Time 1:00 p.m.

Time pump turned off: Date 4/21/2020 Time 5:50 p.m.

Total pumping time: 4 hours 50 minutes.

RECEIVED

JUN 16 2022

Remember, your pump test may not be approved unless it meets the following criteria*:

OWRD

- ☒ The discharge rate was held constant for the entire pumping phase.
- ☒ The pump was on during the entire pumping phase (≥ 4 hours).
- ☒ The discharge was measured at the start of pumping and at least once every hour during the test.
- ☒ Water levels were measured to an accuracy of 0.1 feet or 0.5 percent.
- ☒ Pre-test static water levels were measured at least three times in the hour before pumping began at no less than 20 minutes apart.
- ☒ Water levels were measured at the specified intervals during the pumping phase of the test for at least four hours (≤ 2 min for the first 10 minutes, ≤ 5 min for 10 – 30 minutes, and ≤ 15 min for the remainder of the test)
- ☒ Water levels were measured at the specified intervals (see above) during the recovery phase of the test for four hours or until 90 percent of the maximum drawdown has recovered.
- ☐ If using an airline, measurements were calibrated with an E-Tape and the depth to water was ≥ 300 feet.
- ☒ The pump test cover sheet was completely filled out and signed.
- ☒ The pumping rate was as close as reasonably possible to the (anticipated) pumping rate during normal use of the well.
- ☒ The well was idle for at least 16 hours prior to the test.
- ☒ The pump test was completed by an acceptably qualified person (Oregon licensed water well constructors; Oregon registered professional geologists or certified engineering geologists; certified water rights examiners; Oregon registered professional engineers; and individuals whose primary occupation involves, wholly or in significant part, pump installation, service, or testing).

**This checklist is intended for information purposes only and does not guarantee a pump test approval. The Department reserves all authority pertaining to the implementation of the rules under OAR 690-217.*

Pump tests are intended to provide aquifer and well information for ground water resource characterization and to help solve well problems (OAR 690-217-0015(9)).

Pump test requirements for OAR 690-217 can be found online at:

https://secure.sos.state.or.us/oard/displayDivisionRules.action;JSESSIONID_OARD=1BdwLynsYAPNSQtW330ZjSFZuMscp4Hfi1-1ftsDAAEsMC2_ROSs!-277278532?selectedDivision=3186.

Submit forms to:

**Attn: Certificates Section, Oregon Water Resources Department
725 Summer St NE Suite A, Salem, OR 97301**

Forms may additionally be sent to WRD_DL_pumptestsupport@oregon.gov

I hereby certify that this test has been conducted in accordance with OAR 690-217:

OPERATOR SIGNATURE: _____ DATE: _____

OWNER SIGNATURE: _____ DATE: _____

Additional forms can be found at: <https://www.oregon.gov/owrd/Forms/Pages/default.aspx>.

OWRD 20200115



OREGON
WATER
RESOURCES
DEPARTMENT

**PUMP TEST FORM
DATA SHEET**
Page 1 of 2

WELL LOG # (EX: MARI 99999)	WELL TAG # (EX: L-999999)	WELL NAME OR #	WELL DEPTH	ORIGINAL OWNER	DATE DRILLED	TEST DATE
	L- 117168	Schofield pivot	427	Justin & Jayna Ferrell	5/19/2015	4/21/2020

Date	Time	Time Since Pumping Started (min)	Depth to Water Below MP	Discharge Rate (gpm, cfs, gpm)	Phase (Pre- Test, Pumping, Recovery)	Airline or Shut-in Pressure (psi)	Flowmeter Reading (if available)	Comments
4/21/2020	12pm	0	61.2	0	Pre-test			
	12:20 pm	0	61.2	0	Pre-test			
	12:40 pm	0	61.2	0	Pre-test			
	1:00 pm	0 min	61.2	1000	Pumping ☒		1000	
	1:02 pm	2 min	110.08	1000	Pumping ☒			
	1:04 pm	4 min	115.08	1000	Pumping ☒			
	1:06 pm	6 min	123.08	1000	Pumping ☒			
	1:08 pm	8 min	125.08	1000	Pumping ☒			
	1:13 pm	13 min	127.08	1000	Pumping ☒			
	1:18 pm	18 min	134.08	1000	Pumping ☒			
	1:23 pm	23 min	144.08	1000	Pumping ☒			
	1:28 pm	28 min	149.08	1000	Pumping ☒			
	1:33 pm	33 min	157.08	1000	Pumping ☒			
	1:48 pm	48 min	161.08	1000	Pumping ☒		1000	
	2:03 pm	63 min	161.08	1000	Pumping ☒			
	2:18 pm	78 min	161.08	1000	Pumping ☒			
	2:33 pm	93 min	161.08	1000	Pumping ☒			
	2:48 pm	108 min	162.08	1000	Pumping ☒			
	3:03 pm	123 min	162.08	1000	Pumping ☒			
	3:18 pm	138 min	162.08	1000	Pumping ☒			
	3:33 pm	153 min	162.08	1000	Pumping ☒			
	3:48 pm	168 min	162.08	1000	Pumping ☒			
	4:03 pm	183 min	162.08	1000	Pumping ☒			
	4:18 pm	198 min	162.08	1000	Pumping ☒			
	4:33 pm	213 min	162.08	1000	Pumping ☒			
	4:48 pm	228 min	162.08	1000	Pumping ☒		1000	
	5:03 pm	243 min	162.08	1000	Pumping ☒			
	5:18 pm	258 min	162.08	1000	Pumping ☒			
	5:33 pm	273 min	162.08	1000	Pumping ☒			
	5:48 pm	288 min	162.08	1000	Pumping ☒		1000	
	5:50	Pump Off 290 min		0	Recovery ☒		0	
	5:52	292 min	133.08	0	Recovery ☒			
	5:54	294 min	124.08	0	Recovery ☒			
	5:56	296 min	116.08	0	Recovery ☒			
	5:58	298 min	109.08	0	Recovery ☒		0	
	6:03	293 min	101.08	0	Recovery ☒			
	6:08	298 min	90.08	0	Recovery ☒			
	6:13	303min	83.08	0				
	6:18	308 min	78.08	0	Recovery ☒			

RECEIVED
JUN 16 2022
OWRD



Page 2 of 2

[illegible]

RECEIVED
JUN 16 2022
OWRD