Groundwater Application Review Summary Form

Application # G- 18560
GW Reviewer Phil Marcy Date Review Completed: 5/30/2018
Summary of GW Availability and Injury Review:
[] Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.
Summary of Potential for Substantial Interference Review:
[] There is the potential for substantial interference per Section C of the attached review form.
Summary of Well Construction Assessment:
[] The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

WATER RESOURCES DEPARTMENT **MEMO** Application G-_18560 TO: FROM: **SUBJECT: Scenic Waterway Interference Evaluation** K YES The source of appropriation is within or above a Scenic Waterway NO YES Use the Scenic Waterway condition (Condition 7J) X NO Per ORS 390.835, the Groundwater Section is able to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below. X Per ORS 390.835, the Groundwater Section is unable to calculate ground water interference with surface water that contributes to a scenic waterway; therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway.

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in ______ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec





To:

Kristopher Byrd, Well Construction and Compliance Section Manager

From:

Joel Jeffery, Well Construction Program Coordinator

Subject:

Review of Water Right Application G-18560

Date:

October 5, 2018

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Phillip Marcy reviewed the application. Please see Phillip's review and the Well Log.

Applicant's Well #1 (Unio 50687): Based on a review of the Well Report and on comments by Mike Zwart in a previous groundwater application review (G-17637), Applicant's Well #1 seems to protect the groundwater resource.

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

WELL LD. #L

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STATE OF OREGON

50687 APR 13 2000 WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instruction	s for completing the	is report are o	n the last	page	TED U	ECON DEPT.	START CARD	*44/3	817	
(1) OWNER	: DE		Well Nur	nher			III II			
Name 5 ho	W& ZINI	- Rua	A			County (////o	WELL by legal de	scription:		
Address 640	25 CEKE	RIANE	11.58	AU A	is ell.			L	ongitude	
City LAG 1	RANGE	State	20	7:	GTES		Nor S Range	39E	E os	W. WM.
			سردام	The real Property lies, the last of the la						
		Iteration (renai	OVE r/reconditi	ion) [] Al	7/894	1ax Lot 3 70 KI	ot Block		Subdivision	
(3) DRILL N	TETHOD:		7,0001011		VALIGOTITICAL	Street Address of We	l (or nearest address)	63324	Alich	1111
		Cable	[] Aug	_		(10) 574 100 100		SOVE O	R. 97	824
Other	in REIJE	PSE	LIAUg			(10) STATIC WATE	KLEVEL:			
(4) PROPOS	ED USE:	NE		***************************************		ft. bel			Dete	<u>.</u>
Domestic		Industrial	□ X Ta	iantian		Artesian pressure	lb. per squ	are inch.	Date	
Thermal						(II) WATER BEARI	NG ZONES:			
(5) BORE H	OLE CONSTRI	ICTION:		/LICI				101		
			th of Con	mleted W	11 2 4/ 5	Depth at which water was	first found	12		
Explosives used	Yes Mo	Type	An Of COL	ipiciou w	3000 J					
			^I	nount		From	To	Estimate	ed Flow Rate	SWL
Diameter From	n To Ma		т.	0	•	1 3/	62	Co		2
22 10			1	-			90	200		
	Com		-				174	0 79	X -	
1439 15	1 3045			1-12	Chari	347	344	000m	60/V	
Comparing Alternation Images Alternation Alternation Alternation Images Alternation Images Alternation Images Imag		14 V								
How was seal pl					D OF	(12) WELL LOG:				
_		- W. L	In K	ic \square	р ∏в	Ground				
Well Number										
	ONNER: DF Woll Number Woll Number Woll And State A NE Last A 2									
	(1) OWER: Def WORK COURT County C									
Well Number										
Diameter From To Material From To Sacks or pounds 78 90 76 77 76 76 76 76 76 7										
14 11		3/4					Jan		34	
-			H			Car Jan				
Liner:			Н	H		Claric	<u></u>			
			H			Sur Toand	Brown		78	
Final location of	shoe(s)				, ப	Cond			90	
(7) PERFORA	TIONS/SCREE	NS:								
			Tu	L 23/	×3		,			
Screens		7, 07			-	Clary y vana	-			
From To	Slot	- Name -	Tele/nine			Con The	iand			
515117	5 76× 8 96	90 14	19X	Casing		Clay Tan	,		309	
		7	- Garage			Clay Dank				
				- 1		Clay Do 1 U				
				- 1		Sand of Comment	- 30F1			
				- 1		Sound & Coan W	HEM.			
	OWNER: PK Well Number OWNER A Cold OWNER									
Well Number										
				-	.		Compl	eted	15-9	<u> </u>
Well Number										
	Drawdown	Drill stem	at	_		of this well is in compliance	with Oregon water su	ruction, altera	tion, or abar	donment
1000	100					THE PARTY OF THE P	ion reported above are	true to the be	est of my kno	wiedge
										-
						Signed			_	
		Depth Artesian	Flow For	ind 30	OGPM		ructor Certification	D	ate	
	sis done?	Yes By whom_				I accept responsibility for	the construction alter		4	
		ole for intended	use?	Too lit	tle					ork nk
	dy 🗌 Odor 🔲	Colored	Other							
Depth of strata:						. 11	The same of			elief.
					1	Signed Glalk	1 Jours			7.00
ORIGINAL & FI	RST COPY-WAT	ER RESOUR	CES DE	PARTM	ENT SEC	OND COPY-CONSTRUC	TOP TURN C			コンフン
						- COMBINO	.ok iniku C	or i-cust(JMEK	

Unio 50687 APR 13 2000

STATE OF OREGON

WATER SUPPLY WELL REPORT (as required by ORS 537.765)

(as required by ORS 537.765)

WATER RESOURCES DEPT.

Instructions for completing this report are on the last page of the ALEM, OREGON

WELL I.D. # L. 40678 START CARD # W73877

(1) OWNER:		Wel	l Number	r	(9) LOCATION OF V	WELL by legal desc	ription:		
Name					County	Latitude	L	ongitude	
Address					Township	N or S Range_		E or V	W. WM.
City		State		Zip		1/4			
(2) TYPE OF V	VORK				Tax Lot L	otBlock_		Subdivision	
	Deepening Alters	tion (repair/rec	ondition)	Abandonment	Street Address of Well	(or nearest address)			
(3) DRILL ME						_			
• •	Rotary Mud	Cable [Auger		(10) STATIC WATE	R LEVEL:			
Other	_ , _	_			ft. beld	w land surface.		Date	
(4) PROPOSE	D USE:			-	Artesian pressure	lb. per squa	re inch.	Date	
	Community	Industrial	☐ Irrig	ation	(11) WATER BEARI				
		Livestock	Oth						
	LE CONSTRUC				Depth at which water was	first found			
	ion approval Yes		of Compl	eted Well ft.					
	Yes No Typ				From	То	Estimate	ed Flow Rate	SWL
HOLE		SEAL	_		804	807	50 96		2
Diameter From	To Materia		To S	Sacks or pounds	834	839	50 90	m	2/
			1		1540	1570			> Flown
					1904	1971	Can't De		1
					2/19	2120	"	"	+H
How was seal pla	ced: Method	□A □B		D DE	(12) WELL LOG:	Elevation			
Other	oca. Monioa		`		GIOLER	Elevation			
	om ft. to_	ft. 1	Material		Materia	1	From	To	SWL
Gravel placed from			Size of gr		Clay Tan +.	40.04		476	JWL
(6) CASING/L			one or gr		Clay Given + S			481	
Diameter		auge Steel	Plastic '	Welded Threaded	Clay Tan + B			538	
					Clay Haven		538	541	
Casing:			H		Sand Course		541	544	
***************************************	1 1				Clay Hear SBF++			564	
					Clay Fan & Bro		564	579	
Liner:	1 1	二古			Clay Tan + Brown		579	598	
	 		Н	H H	Sand course +		598	603	
Final location of s	shoe(s)				Clay Gray 5		403		
	TIONS/SCREEN	č.		791	Clay Gran + San			608	
Perforation					Clay Shay So		608	621	
Screens	_		Materi	ial	Clay + Shale	10	621	632	
sacar	Type		Tele/pipe		Clay Green +	Mary SAST	637	674	
From To	size Number	Diameter	stre	Casing Liner	Clay Black	SACT		725	
	+ + -						725	749	
	+ + -				Clay Gray		7610		
	+ +				Class than 5	OFT Course	767	153	
					Clay Have of	un HARD	123	901	
					Saud Carre	THAND	804	804	
(O) WELL TES	STS: Minimum te	atina tima ia	1 hours		Date started	-		1007	
(6) WELL IES	ors: wholmom to	sting time is	I Dour		Date started	Comp	The same of the sa		
				Flowing	(unbonded) Water Well				
Pump	Bailer	Air	- 4	Artesian	of this well is in complian	performed on the cons ce with Oregon water s	supply well c	onstruction st	tandards.
Yield gal/min	Drawdown	Drill stem	at .	Time	Materials used and inform	ation reported above a	re true to the	best of my kr	nowledge
				1 hr.	and belief.		navo:		
					Simud		WWC No		
Townsont of		Donth A-tasks-1	Flow For	L	Signed Water Well Co	naturatan Cartiff at		_Date	
Temperature of w		Depth Artesian	Flow Pot	ind	(bonded) Water Well Co				
Was a water analy	_	es By whom_			I accept responsibility: performed on this well du				
	ntain water not suitab			Too little	performed during this tim	e is in compliance with	Oregon wat	er supply well	1
	ddy 🗌 Odor 🔲 0	Colored []	Other		construction standards. T	his report is true to the			l belief.
Depth of strata:						1/2 1	WWC N	umber <u>/37</u>	7
					Signed OOV	once		_ Date 3 7	5-78

Unio 50687

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

APR 1 3 2000 WELL I.D. #L 40698 (as required by ORS 537.765)

WATER RESOURCES DEPT.

Instructions for completing this report are on the last page of this formal EM, OREGON START CARD # W73877

(I) OWNER:		Well Nun	nber	(9) LOCATION OF V	VELL by legal desc	ription:		
Name					Latitude			
Address				Township	N or S Range		E or W	V. WM.
City		State	Zip	Section	1/4		1/4	
(2) TYPE OF	WORK			Tax LotL	ot Block	S	ubdivision	
		ration (repair/reconditi	on) Abandonment	Street Address of Well	(or nearest address)			
(3) DRILL M	ETHOD:			'	_			
Rotary Air	Rotary Mud [Cable Auge	er	(10) STATIC WATER	LEVEL:		100	
Other					w land surface.		Date	
(4) PROPOSE	ED USE:	*		Artesian pressure	lb. per squa	re inch	Date	
Domestic	Community [Industrial I	rigation	(11) WATER BEARI	NG ZONES:	ac aicii.	Date	
Thermal			Other		io zones.			
	OLE CONSTRUC			Depth at which water was	finet formal			
		No Depth of Con	moleted Well ft	Deput at winds water was	Tust found			
		pe Ar		From	T			
HOLE		SEAL AL		2477	2498		d Flow Rate	SWL
Diameter From			C				PN 103.	
Dummeter From	l lo Mater	ial From To	Sacks or pounds	97/6	27/8	36061	M Temp	107.5
	+			9731	9738		M 106	6
	+			2756	4767	50 GF	M	
	 	\rightarrow		2770	2799	100 6	PM	
				(12) WELL LOG:				
How was seal pla	aced: Method	□A □B □]C	, ,	Elevation			
Other								
Backfill placed fr	rom ft. to_	ft. Materia	al	Materia		From	To	SWL
Gravel placed fro	om ft. to	ft. Size of	gravel	Clay Green- &	SOFT	807	834	5112
(6) CASING/	LINER:			Sand Course		834	839	
Diameter	r From To	Gauge Steel Plastic	Welded Threaded	Clay year 5	DET - HOOD	839		
	1 1	1		Sand Clary	OF CTRIARD		857	
Casing:				Sand + Clay)	roun	857	989	
				Clay Green		989	1015	
	+			Clay Green +		1015	1024	
				Clay Green 9	SOFT	1024	1042	
Liner:					MARD	1042	1052	
				Sand + Clay	Freen	1052	1061	
Final location of				Clay Green	SOFT	1061	1080	
(7) PERFORA	TIONS/SCREEN	S:		Baralt Blac	6+ Pinh.		1082	
☐ Perforation	s Method			Clay Gragn ?		1082		
Screens	Туре	Mat	orial	Booth Brown			1001	
From . To	Slot size Number	Tele/pip		shale their		1001	1091	
110111	1	Diameter Size	Casing Liner	Bout Brown	Maked un	DAIAG.	1/32	
				Harall Har WH	DO AL M	422		
				Boself Hay HA	LI HAMASE THERE	11/10	1149	
				Rada Plack (CAN MINE SOF	11199	1/98	
	 	 	_ 🖺 🖺	Darott Tille & Mi	W VERY HAR	01/98	1204	
				Basalt Red - C	ar sur -	1204		
(e) werrane	ere. Mi-i			that Gran			1217	
(O) WELL IES	o 19: Munimum te	esting time is 1 hou	г	Date started	Comp			
	□ n ::		Flowing	(unbonded) Water Well C				-
☐ Pump	Bailer	☐ Air	Artesian	I certify that the work I	performed on the const	ruction, altera	ation, or abanc	donment
Yield gal/min	Drawdown	Drill stem at	Time	of this well is in compliance Materials used and informs	tion reported above an	ipply well cor	astruction stan	idards.
			1 hr.	and belief.		THE REAL PROPERTY.	ost of fifty kilo	wiedge
				1		WWC Nun	nber	
				Signed			Date	
Temperature of wa	ater]	Depth Artesian Flow Fo	ound	(bonded) Water Well Con	structor Certification			
Was a water analy	sis done?	es By whom		I accept responsibility fo	r the construction, alte	ration, or ahe	ndonment wa	rk
Did any strata con	tain water not suitable	le for intended use?	Too little	Detrormed on this well duri	ng the construction det	as removed al	A 11	k
Salty Mud	ldy □Odor □0	Colored Other	_	performed during this time construction standards. This	is in compliance with (Tegon Water	gunnly wall	
Depth of strata:				1 11	Port is due to the 0			
				Signed () - (///	1-	wwc Nun	nber <u>139</u>	Z
ODICINAL	ID OT CODY WAT	ED DECOMBORS -	ED A DOWN CONTROL	Signed Wayye	forme		Date	
UKIUINAL & F	IKS I COPY-WAT	EK KESOUKCES D	DEPARTMENT SE	COND COPY-CONSTRU	CTOD TUIDO	ODV CITET	OI (FD	

STATE OF OREGON

Un10 50687 WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

APR 13 2000

WELLI.D. #L 40698 START CARD # W73877

(as required by Instructions for	ORS 537.765)	eport are on ti	he last par	ee of this form	R RESOURCES DEPT.	START CARD #		77	
(1) OWNER:		W	ell Numbe	r	(9) LOCATION OF V	VELL by legal desc	rintion:		
Name					County	Latitude	I.o	ngitude	
Address			***		Township				www.
City		State		Zip	Section				7. WIVI.
(2) TYPE OF W	VORK				Tax LotLo	t Block	S	uhdivision	
. ,	Deepening Alter	ation (repair/re	condition)	Abandonme		(or nearest address)			
(3) DRILL ME	THOD:				-				
Rotary Air [Rotary Mud	Cable [Auger		(10) STATIC WATER	LEVEL:	1,14		
Other					ft. belo	w land surface.		Date	
(4) PROPOSED	USE:				Artesian pressure			Date	
	Community [_	☐ Irrig	gation	(11) WATER BEARIN	NG ZONES:			
		Livestock	Oth	er	_				
	LE CONSTRUC				Depth at which water was	first found			
	on approval [Yes								
	Yes No Typ		Amou	unt	From	To		d Flow Rate	SWI
HOLE		SEAL				2897	GPM		Flow
Diameter From	To Materi	al From	To 8	Sacks or pounds	2928	2942	Cant 1	etermin	41
						2969	11		1
		-+-+				3030		4	1
					3031	3054	Temp 10	6.8	<u> </u>
					(12) WELL LOG:				
	ed: Method		3 🗆 C	_ D _	E Ground	Elevation			
Other	m ft. to_		M-41-1		-		1 -	T _ T	
Gravel placed from			Material_ Size of gr		Material D 44		Prom /2/7	To	SWL
(6) CASING/L		14.	Size of gr	avei	- Baratto Black.	- MAYOR ROOM	r /2//	1274	
		Gauge Steel	Plastic V	Welded Thread	geny day has				
Diameter		1 —	Piasuc V					(77/	
Casing:	+ + +				Basalt Gray wit	woown	9	1459	
***	 				Barath Brown		IUCA		
	 	$\exists \exists$			Shale Orange H	HPD Change	001440	1760	
Liner:	+				Rasslt Brown	- Clay led SO	TILOT	1604	
	 		Η		Shale Red + C		1504		
Final location of sh	noe(s)				Bank Black +			1599	
	TONS/SCREEN	S:		***************************************	Barato Brown			1377	
Perforations					clay Green	ras ougha	2 1 2 11	1631	
Screens	Туре		Materi	al	Baratt Mart Blo	ch - What the	1/071	1672	
-	Slot	Diameter	Tele/pipe	Casing Lin	7 4-0 . 14			10.70	
From To	size Number	Diameter	51.00		Show t Grave	HARD	1010	1677	
					Bosolf Rody &	SOFT	1677		
					Shale Green +	Rosalt Blace	1	1699	
					Basato Redy She	W HARD +	1699		
					Shale Show + 1	hour HARD		1719	
					- Parks Krown Ina	w Clay Hory Arm	2 17/9	1721	
8) WELL TEST	TS: Minimum to	esting time is	1 hour		Date started	Comp	eleted		
				Flowing	(unbonded) Water Well (onstructor Certifica	tion:		
☐ Pump	Bailer	Air Air		Artesian	I certify that the work I	performed on the cons	struction, alter	ation, or aba	ndonmen
Yield gal/min	Drawdown	Drill stem	at	Time	of this well is in compliance Materials used and information	e with Oregon water s ition reported above a	upply well co re true to the b	enstruction states	andards. owledge
				1 hr.	and belief.				
					-		WWC Nu	mber	
					Signed			Date	
Temperature of war		Depth Artesian	Flow Fou	ind	(bonded) Water Well Con				
Was a water analys	_	es By whom_			I accept responsibility for performed on this well during	or the construction, alt	eration, or ab	andonment w	ork
	ain water not suitab			Too little	performed during this time	is in compliance with	Oregon water	r supply well	
	dy Odor O	Colored	Other		_ construction standards. Th	is report is true to the	best of my kn	owledge and	belief.
Depth of strata:							WWC Nu	mber <u>13</u>	79
					Signed Wary	proper		_Date	
RIGINAL & FI	RST COPY-WAT	ER RESOUF	CES DE	PARTMENT :	SECOND COPY-CONSTRU	CTOR THIRD	COPY-CUS	TOMER	

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RECEIVED

STATE OF OREGON 50687
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

APR 13 2000

WELL I.D. # L. 40698 START CARD # N 73877

Instructions	for completing th	s report are or	the last	MATCH	TESO!	IPCES DEDT	START CARD #	10 / 5	8/7	
(1) OWNER:		,	Well Nur	nber SA	EM, C	FEGOLOCATION OF	WELL by legal dade	minelon.		
Name			.,			County	Tationals	ттриоп:		
Address						Township	Latitude	L	xngitude	
City		State		Zip		Section	N or S Range		E or	W. WM.
(2) TYPE OF	WORK	June		2.4		Ton I at	1/4_		_ 1/4	
. ,	Deepening A	Iteration (renair	dit	ion) [] Ahaa	d	Standard Civil	LotBlock_	S	Subdivision_	
(3) DRILL M		watton (repair)	i ccolluit	IOII) Abai	dorment	Street Address of We	ll (or nearest address)			
. ,	Rotary Mud	Cable	Aug			(10) CTATIC WATE	DIEUE			
Other		Саріе	LAug	CI		(10) STATIC WATE				
(4) PROPOSI	ED USE:						low land surface.		Date	
Domestic	Community	[Industrial		rrigation		Artesian pressure	lb. per squar	re inch.	Date	
Thermal	Injection	Livestock		Other		(11) WATER BEAR	ING ZONES:			
	DLE CONSTRU			Julici		Death was 111				
	ction approval []		h of Com	nnlated Wall		Depth at which water wa	s first found			
Explosives used	Yes No	Time	A -	mormt			T			
HOLE	☐ 163 ☐ 140	SEAL.	AI	nount		From	To	Estimate	d Flow Rate	SW
Diameter From			•							
From	. IO MAIN	erial From		Sacks or po	ends					
	 		 				+			
	+		 							
	1		\vdash							
How was seed no	aced: Method			1c		(12) WELL LOG:				
Other		1 A	15 L]c	□в	Ground	Elevation			
	rom ft. to		Materia	-1						
Gravel placed fro		ft.		-		Materi		From	To	SWL
(6) CASING/	INFD	16.	Size of	gravel		Basat May + C	oy Green SOFT	1721	1748	
Diameter						Bassto Show + shall	Hervillay Hay	1798	1906	
	1		Plastic	Welded	Threaded	Baralt Gran	el like	1906	1971	
Casing:		+-+		\Box		Basalt May	clay tray	1971	1993	
						Bosalo Black	+ Clay Gray	1993	1999	
-						Basalt Gray	L VERY HARD	1999	2004	
	+ + -	 				Basato Black + C	lay Black SOF	12004		
iner:		+-	\Box			Spale moon			2029	
?!! 1! £	1.4					Essatt Black +	Day Gray SOFT	2029	2070	
inal location of	snoe(s)TIONS/SCREE	NG				Baselt Frey	e + shale	2070		
						the hours	Show SOFT		2119	
Perforation	_					Barato Aro		2119	2120	
Screens	Type		Mate Tele/pipe			Essalt Black +1	Pare Grown, Hear	2120	2175	
From To	size Numbe	r Diameter	size	Casing	Liner	Baralt Mac HAR	0+Clay Gray	2175	2222	
	+	+		_ 📮		Bristo Black + Clay.	may bear the	2222	2229	
	+	+		_ 📮		Call Seast Clay 19	ray & Shole Gross	2229	2251	
	+	+		_ 🛚		Break Black + she	be Green +	2251		
	+	-		_ 🛮		clay may	HARD		12.66	
				_ 🗆		May Brown fre	4 Man Soft	2267		
) INDIA	100C 3.41 :					+ HARD - ROLL	to Black		2275	
) WELL TES	TS: Minimum	testing time i	s 1 bour	r		Date started	Comple			
	—			Flowi		(unbonded) Water Well (
Pump	Bailer	☐ Air		Artesi		I certify that the work I	performed on the constr	notion alterna	tion, or aban	donment
Yield gal/min	Drawdown	Drill stem	at	Th	me	of this well is in compliant Materials used and inform				
		+		1	hr.	and belief.		- ac so rite De	on on my kno	wiedge
				 				WWC Num	ber	
						Signed			Date	
emperature of wa		Depth Artesian	Flow Fo	ound		(bonded) Water Well Con	structor Certification:			
as a water analys	_	Yes By whom_				I accept responsibility f	or the construction, alter	ation, or abar	idonment wo	ork
	tain water not suita			Too littl	e	performed during this time	is in compliance with O	s reported ab	ove. All wo	rk
	dy Odor C	Colored	Other _			construction standards. Th	is report is true to the be	st of my know	supply well wiedge and h	elief
epth of strata:						10	/	WWC Num		
						Signed Danks	Jama		Date_	
						COND COPY-CONSTRU				

STATE OF OREGON WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

APR 13 2000

ALISOT C	caous ic		TOHILE BUILD I	CPOIT M	, con	LLIC IMP	page or an	· IOI III.	HALEM, OREGON				
(1) OW	NER:				W	ell Nu	mber		(9) LOCATION OF	WELL by legal descr	ription:		
Name									· •	Latitude	-	ngitude	
Address									Township	N or S Range_		E or V	V. WM.
City				State	,		Zip		Section	1/4_		1/4	
(2) TYI	PE OF V	VORK							Tax Lot	LotBlock	Sı	ubdivision	
			ing 🔲 Alter	ation (re	cpair/r	econdit	tion) 🔲 Aba	ndonment	Street Address of We	ll (or nearest address)			
(3) DR 1													
	•	Rota	ary Mud	Cable	•	Aug	er		(10) STATIC WATE	R LEVEL:			
Other										low land surface.	I	Date	
(4) PR(٦		_			Artesian pressure	lb. per squar	re inch. I	Date	
Dome			nmunity [_			Irrigation		(11) WATER BEAR	ING ZONES:			
Thern		Inje	NSTRUC	Lives			Other		Don't at makink mustur mu	- F-+ F 1			
			roval TYes			of Co	moleted Wel	1 6	Depth at which water wa	s irst found			
			No Ty						From	To	Patienata	I Di D	1007
	HOLE	res	No Ty		EAL	^	moun		FIOI	10	Estimated	I Flow Rate	SWL
Diameter		To	Materi		From	To	Sacks or	oomads.					+
		"		i		"		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					+-
													_
													+
									(12) WELL LOG:				
How was	seal plac	ced:	Method	□ A		В []c 🔲	D DE	` '	d Elevation			
Out	er												
Backfill 1	placed fro	om	ft. to		ft.	Mater	ial		Materi		From	То	SWL
Gravel pl	aced from	n	ft. to_		ft.	Size o	f gravel		Exall Black	+ Brown	2276	2278	
(6) CA	SING/L	INER	:						Clay Brown	Black Gran	-2278		
1	Diameter	Fre	m To	Gauge S		Plastic	Welded	Threaded	Baratt Black			2288	
Casing:_		+	\rightarrow							w Gray Shak ly		7297	
_		-	\rightarrow						Break Black - Ma	7		2302	
_			\rightarrow						Bosalt Black			2329	
		+	\rightarrow						Baralt Black		2329	2336	
Liner:		+							Baralt Blac			2349	
n –									Basalt Bray		2349	2353	
Final loca			SCREEN	C.					Break Migen + 1			2355	
										ARD Clay Shows		2357	
	forations		Method			14	terial		Bassle Black	Clay Bray Bree		2359	
Sa		Slot	Type			Tele/pi	pe		Bosalt May H			2368	
From	To	size	Number	Diame	eter	size	Casing			Clay Gray			
		+		<u> </u>			一 		Bosolt Black			2387	
		+					—		Bara H. Bland	Com Man Kon	2390	2390	
		1					-		Routh Harris	M. L. W.	- 2394	2374	
				†			_	H	Clay France	Rough Hapi	7 277	2420	
									Baralt Shan	4 Shalo Street	27429	2448	
(8) WE	LL TES	TS: M	linimum te	esting t	time i	s 1 ho	ur		Date started	Comp		18.70	
								wine	(unbonded) Water Well	The state of the s			
Pur	mp		Bailer		Air			wing esi a n		I performed on the const		stion, or abar	donment
	al/min		awdowa		ill sten	n at		Time	of this well is in compliar Materials used and inform	nce with Oregon water st	innly well cor	attraction sta	ndarde
								1 hr.	and belief.	mental reported above an	arue to the p	est or my kn	owiedge
											WWC Nun	niber	
									Signed		1	Date	
Temperat	ure of wa	ter	1	Depth A	rtesiar	n Flow	Found		(bonded) Water Well Co	onstructor Certification	:		
Was a wa	ter analy:	sis done	? 🔲 Y	es By	whom				I accept responsibility	for the construction, alte	eration, or aba	ndonment w	ork
Did any s	trata con	tain wat	er not suitab	le for in	tended	d use?	Too l	ittle	performed on this well do performed during this tim	e is in compliance with (Oregon water	supply well	
Salty	Mud	dy 🗀	Odor 🔲	Colored		Other			construction standards.	his report is true to the b	est of my kno	wiedge and	belief.
Depth of	strata:									2.0	WWC Nun	nber 13	19
									Signed Wary	2 Jame		Date 3-	5-98
ORIGIN	AL & F	RST C	OPY-WAT	ER RE	SOU	RCES	DEPART	MENT SE	COND COPY-CONSTR	UCTOR THIRD C	OPY-CUST	OMER	

Unio. 50687

APR 1 3 2000

STATE OF OREGON WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

(as required by ORS 537.765)

WATER RESOURCES DEPT.

Instructions for completing this report are on the last page of this for SALEM, OREGON

WELL I.D. # L 40698 START CARD # W73877

(1) OWNER: Well Number	(9) LOCÁTION OF WELL by legal description:
Name	CountyLatitudeLongitude
Address	Township N or S Range E or W. WM.
City State Zip	Section 1/4 1/4
(2) TYPE OF WORK	Tax Lot Lot Block Subdivision
New Well Deepening Alteration (repair/recondition) Abandonment (3) DRILL METHOD:	Street Address of Well (or nearest address)
Rotary Air Rotary Mud Cable Auger	(10) STATIC WATER LEVEL:
Other	ft. below land surface. Date
(4) PROPOSED USE:	Artesian pressure lb. per square inch. Date
Domestic Community Industrial Irrigation	(11) WATER BEARING ZONES:
Thermal Injection Livestock Other	(11) William Delination Delination
(5) BORE HOLE CONSTRUCTION:	Depth at which water was first found
Special Construction approval Yes No Depth of Completed Wellft.	
Explosives used Yes No Type Amount	From To Estimated Flow Rate SWL
HOLE SEAL	10th 10th 10th 10th 10th 10th 10th 10th
Diameter From To Material From To Sacks or pounds	
Diameter Linn to Management Linn to Ductor of housing	
	(10) WELL LOC
How was seal placed: Method A B C D E	(12) WELL LOG:
	Ground Elevation
Other ft. to ft. Material	Material From To SWL
Gravel placed from ft. to ft. Size of gravel	Cinder Red - State Sheen - 2448
(6) CASING/LINER:	Basalt Black, 2468
	Bondt Black Shale sed then prove 2468 2476
	Cinder Brown Tan - Shale Shoen 2476 1480
Casing:	Cinder Red - Shalo Heen 2480 2482
	Basal Gray- Clay Shart 2482 2486
	Cindar Brown Black that then Jun 248 6 2503
	Baralt Block + Stule Theory Harr 1503 2506
Liner:	Baralt Shan + Clark Shawa 2506 2510
	Barolb Gray + Clay Gray 251B 2560
Final location of shoe(s) (7) PERFORATIONS/SCREENS:	Basalt Black + white - Shale their 8540 1569
	Barato Brace + Hack roots whole the 25 (A 358)
Perforations Method	
Screens Type Material Tele/place	Boyalt Mary HARD - Clay Gray 1581 2590
From To size Number Diameter size Casing Liner	Brown Black - Shake thorn- Cinder 2590
	red ander VES. 2592
	Cindon Black Brown Blue Green 2592 2594
	Basalto Black Mak Theon Hay Bran 254 2597
	Baselo How - axote while - clay there 2597 2599
(9) WEI I TESTS. Minimum testing time in 1 hours	Basalt Black - Male Green, HARD 2599 12605
(8) WELL TESTS: Minimum testing time is 1 hour	Date started Completed
Flowing	(unbonded) Water Well Constructor Certification:
Pump Bailer Air Artesian	I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards.
Yield gal/min Drawdown Drill stem at Time 1 hr.	Materials used and information reported above are true to the best of my knowledge
1 nr.	and belief.
	WWC Number
The state of water Plant Found	Signed Date (bonded) Water Well Constructor Certification:
Temperature of water Depth Artesian Flow Found	
Was a water analysis done? Yes By whom	I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work
Did any strata contain water not suitable for intended use? Too little	performed during this time is in compliance with Oregon water supply well
Salty Muddy Odor Colored Other	construction standards. This report is true to the best of my knowledge and belief.
Depth of strata:	WWC Number /399
	Signed was force Date

APR 1 3 2000

STATE OF OREGON WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Unio. 50687

WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

WATER RESOURCES DEPT.

SALEM, OREGON

WELL I.D. # L_ START CARD # W73877

(1) OWNER:		Well Nu	mber	(9) LOCATION OF V		-		
Name				County				
Address				Township				WM.
City	Sta	te	Zip	Section				
(2) TYPE OF WOR	K			Tax LotLo		Su	ubdivision	
New Well Deeper (3) DRILL METHO		(repair/recondit	ion) Abandonment	Street Address of Well	(or nearest address)			
Rotary Air Ro		ole 🗀 Aug	ger	(10) STATIC WATER	LEVEL:			
Other	_	_			w land surface.	I	Date	
(4) PROPOSED US	E:			Artesian pressure	lb. per squa	re inch.	Date	
Domestic Co	mmunity Ind	ustrial 🔲	Irrigation	(11) WATER BEARIN	NG ZONES:			
	ection Live	estock	Other					
(5) BORE HOLE C	ONSTRUCTION	N:		Depth at which water was	first found			
Special Construction ap	proval Yes N	o Depth of Co	mpleted Wellft					
Explosives used Ye				From	То	Estimated	d Flow Rate	sw
HOLE		SEAL						
Diameter From To	Material	From To	Sacks or pounds					_
								\top
								_
								\top
				(12) WELL LOC:				
How was seal placed:		A 🗆 B [C D DE	(12) WELL LOG: Ground	Elevation			
Other		<u> </u>				T_		
Backfill placed from				Materia Materia	the same of the sa	From	To	SWL
Gravel placed from		ft. Size	of gravel	Bass B Gray			2611	
(6) CASING/LINE				Basalb Black				
Diameter Fr	rom To Gauge	l		A . A . 7	NP 915		2618	
Casing:				Basalt Gray +.	Male Grove Qua	72618	2627	
				Breatt Black	May Bed Cine	1012627		
				stale treen	-		2629	
	$\overline{}$			Shale Black +			2635	
Liner:				Batalt May +	Shak freen	2635	2639	
				Rosalb Mayo - M		6 2639	266	
Final location of shoe(s)				Erralt Spay 1165	. Quarte White.	2646	2648	
(7) PERFORATION	S/SCREENS:			Shat Steen -lus	do Red + Blac	4. 2648	2650	
Perforations	Method			ander Red. Bl			7.653	
Screens	Туре		aterial	Baralt Black - A			2661	
	ot ze Number Dia	Tele/p meter , size		1 1 1 -1			2663	
				Basalt Black.				
			_ 0 0	Mak Man B			2667	
			_ 0 0	Bosalt Gray-O	as Graf shale		2	
				Green			2674	
				Break there Cha	- they that See	2671	2675	
				10 10	Clay Grat	2675	2677	
8) WELL TESTS:	Minimum testing	g time is 1 ho	ur	Date started	Comp			
				(unbonded) Water Well (
Pump	Bailer	Air	Flowing Artesian	I certify that the work I	performed on the cons	struction, alter	ation, or shen	donme
	_	Drill stem at	Time	of this well is in compliance	e with Oregon water a	nupply well co	nstruction star	ndanie
			1 hr.	Materials used and information and belief.	suon reported above a	re true to the b	est of my kno	wiedg
						WWC Nur	mher	
				Signed			Date	-
Temperature of water	Denth	Artesian Flow	Found	(bonded) Water Well Cor	etructor Cartification			
Torriborment of Manot		y whom					ndon	-l-
Was a water analysis do		, **iiotii		I accept responsibility f performed on this well dur	ing the construction da	stes reported a	have All war	nrk rk
		intended use?	Too little			mon robornon a	DOLO VIII MOI	
Did any strata contain w	ater not suitable for		Too little	performed during this time	is in compliance with	Oregon water	supply well	-11-0
Was a water analysis do Did any strata contain w Salty Muddy [Denth of strate:	ater not suitable for			performed during this time construction standards. The	is in compliance with	Oregon water best of my kno	supply well owledge and b	
Did any strata contain w	ater not suitable for			performed during this time	is in compliance with	Oregon water best of my kno	supply well	

SOG87 APR 13 2000

WELL I.D. # L	40698	-
START CARD #		

STATE OF OREGON

WATER SUI	PPLY WELL R	EPORT					WELL I.D. # L			
(as required by	y ORS 537.765)			WAT	FA RE	OURCES DEPT	START CARD #_	W738	TT	
Instructions fo	or completing this r	eport are on	the last pa	ge of this	SAI FR	CONCES DEPT		***************************************		
(1) OWNER:		V	ell Numbe	er .	-, 11	(9) LOCATION OF V	VELL by legal descr	intion:		
Name				•		OFFICATION OF V	Latitude	I ~	naitude	
Address						,	Latitude N or S Range		IZ V	W WA
City		State		Zip						w. wm.
	VODV.	State		Ζψ		Tow Late	1/4		1/4	
(2) TYPE OF V			****				otBlock			
(3) DRILL ME	Deepening Alter	ation (repair/r	econdition	Aban	conment	Street Address of Well	(or nearest address)			
. ,		70				(10) SMARIC WARRY	V NWSI			
	Rotary Mud	Cable	Auger			(10) STATIC WATER				
Other							w land surface.		Date	
(4) PROPOSEI						Artesian pressure		e inch.	Date	
	Community	_	☐ Irri			(11) WATER BEARI	NG ZONES:			
	Injection [Oth	er						
(5) BORE HO	LE CONSTRUC	TION:				Depth at which water was	first found			
Special Constructi	ion approval 🔲 Yes	☐ No Depti	n of Compl	cted Well	ft.					
Explosives used	Yes No Ty	pe	Amo	unt		From	То	Estimated	d Flow Rate	SWI
HOLE		SEAL						_		
Diameter From	To Materi	al From	To	Sacks or po	wads					
						(12) WELL LOC.				
How was seal place	ced: Method		В 🗆 С	: D	□E	(12) WELL LOG:	Diametica.			
Other		U U				Ground	Elevation			
Backfill placed fro	om ft. to_	ft	Material			Materia	I	From	To	CNA
Gravel placed from			Size of g			Basalb Black		2677		SWL
(6) CASING/L		1-	Size of g	avei		GPM 120 TEM		4611		
.,		C C41	DI - 41-	397.14.4				7/-0	2698	
Diameter	From To	Gauge Steel	Plastic		Threaded	Breatt Black		2698	2761	
Casing:	 			Ц		Bornett Rlack- H				
-	+					Bust Black-			2712	
	+				\sqcup	Basalt Groy +	hall troom HAR	02712		
	+					Quarte	7 / 1 //	-	2716	
Liner:						Bosalb Black (1)				
						BPM 350 TEM			2718	
Final location of s						Basall Gray - M	Apple Hopen Loose	2718	2731	
7) PERFORAT	TIONS/SCREEN	S:				Baralt Black - Qu	while VES.	2731	2738	
Perforations	Method					Bosott Black	Quarter SOFT	2738		
Screens	Туре		Mater	ial		GPM 35 TEM	P 106.6		2740	
From , To	Slot size Number	Diameter	Tele/pipe	Casing	Liner	Broth Black (lay Stay	2740		
				. 🗆		Lunder Ra	6		2747	
						Baralt Grow-	Clay Gray	2747	2750	
				. \square		Broke Grain	Black Class	2750	2	
				. \square		Gray - Cinde	Red VES		2756	
						Revall Hour Cla	4 Hour - state	2756		
						GPM 50 TEN	19 1075		2767	
8) WELL TES	TS: Minimum to	esting time i	s 1 hour			Date started	Compl	eted		
		•		-		(unbonded) Water Well				
Pump	Bailer	Air		Flow Artes			performed on the const		ation or she	ndonman
Yield gal/min	Drawdown	Drill sten	n at	_	ime	of this well is in complian	ce with Oregon water gu	noly well co	nstruction et	andarde
	2,1			T	hr.	Materials used and inform and belief.	ation reported above are	true to the b	est of my kn	nowledge
				<u> </u>	- 44.	and collect.		WING N	mbar	
						Signed		WWC Nur		
Temperature of		Denth Artests	n Flore Free	d		Signed Water Well Co.			Date	
Temperature of wa		Depth Artesia		ma		(bonded) Water Well Con				
Was a water analys	_	es By whom				I accept responsibility i performed on this well dur	or the construction, alte	ration, or abs	hove All	vork vork
	tain water not suitab			Too lit	rie	performed during this time	is in compliance with (Dregon water	supply well	1
	ldy Odor O	Colored	Other			construction standards. The	us report is true to the b	est of my kno	owledge and	belief.
Depth of strata:							1	WWC Nu	mber / 84	19

STATE OF OREGON WATER WELL REPORT (as required by ORS 537.765)

Unio. 50687

APR 13 2000

(START CARD) # W73877

Instructions for	completing this re	port are on the la	T PARE OF THE PARE	ESOURCES DEPT.				
(1) OWNER:			umberSAL	MO) CREGON ON OF V				
Name					Latitude			
Address					N or S Range			. WM .
City		State	Zip		1/4			
2) TYPE OF W	ORK				ot Block			
New Well D	eepening Altera	tion (repair/recond	ition) Abandonment	Street Address of Well	(or nearest address)			
3) DRILL MET	HOD:							
Rotary Air	Rotary Mud	Cable A	iger	(10) STATIC WATER	R LEVEL:			
Other				ft. belo	w land surface.	D	Date	
4) PROPOSED	USE:			Artesian pressure	lb. per square i	nch.	Date	
Domestic	Community	Industrial [Irrigation	(11) WATER BEARI	NG ZONES:			
Thermal	Injection	Livestock	Other					
(5) BORE HOL	E CONSTRUCT	TION:		Depth at which water was	first found			
Special Construction	on approval Yes	☐ No Depth of C	ompleted Wellft.					
Explosives used	Yes No Typ	e	Amount	From	То	Estimated	Flow Rate	SWL
HOLE		SEAL						
Diameter From	To Materia	d From To	Sacks or pounds					
				(12) WELL LOG:				
How was seal place	ed: Method	□A □B	C D E	1 ' '	Elevation			
Other								
	m ft. to_	ft. Mat	erial	Materia	ıl	From	To	SWL
Gravel placed from			of gravel	Brule Black	- Shab Stoon	2767	2769	
(6) CASING/LI				Bent Hear		2769		
Diameter		Gauge Steel Plas	tic Welded Threaded	Quarter while			2799	
				Brath Block	Brown Cinder	2799	1	100-0
Casing:				Rod - Quarte			2807	
		커뮤 뉴		Basalt tray +		2803		
				Basalo Black		2811		
iner:				ander Bre		-011	2827	
ancı.				Baralt Gray		1077	1832	
Final location of sh	100(c)			Basall Blas			2840	
	TONS/SCREEN	ç.			Varte White SOFT	2000	2843	
					shak Shan HARD		2845	
Perforations	_		Material				2849	
Screens	Type		pipe		· Aprtablite SOFT	2849		
From To	size Number	Diameter si	ze Casing Liner	Basalo Brew- 6	Lab Han COCT		2851	
				Break Black- 1	Way May HARD	2851 1001	2881 2889	
				Baralt Gray 1 may	PURY MINE DATE	1889	1001	
	-			6PM 20	n-cinado (2007)	1001	1007	
					Marie Warre	100-	2897	
				Bratt Black		2897	2907	
O) THEFT I CONT.	rc. Winter			Brall Grave-C	σ	2907	2923	
(8) WELL TEST	rs: Minimum te	sung time is 1 h	iour	Date started	Complet			
	□n "		Flowing	,	Constructor Certification			
Pump	Bailer	Air	Artesian	of this well is in complian	I performed on the construce with Oregon water supp	ction, alter	auon, or aba	ndonment andards
Yield gal/min	Drawdown	Drill stem at	Time	Materials used and inform	nation reported above are to	rue to the b	est of my kn	owledge
			1 hr.	and belief.				
						WWC Nur		
				Signed			Date	
Temperature of wat		Depth Artesian Flo	w Found	(bonded) Water Well Co				
Was a water analys		es By whom			for the construction, altera ring the construction dates			
	ain water not suitab			performed during this tim	e is in compliance with Or	egon water	supply well	·
Salty Mudd	iy Odor O	Colored Oth	er	construction standards. T	his report is true to the bes	t of my kno	owledge and	belief.
Depth of strata:				1 100	\mathcal{J}	WWC Nu	mber 159	4
				Signed Walks	dame		Date	

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

UNIO - 50687

APR 1 3 2000

11 of #12 40698

(START CARD) # W73877

Instructions for completing this report are on the last page of this MATER RESOURCES DEPT. OF WELL by legal description: (1) OWNER: Well Number Name County Latitude Longitude Address Township N or S Range City State Section __ 1/4__ 1/4 (2) TYPE OF WORK Tax Lot Lõt Block Subdivision New Well Deepening Alteration (repair/recondition) Abandonment Street Address of Well (or nearest address) (3) DRILL METHOD: Rotary Air Rotary Mud Cable (10) STATIC WATER LEVEL: Auger Other ft. below land surface. Date (4) PROPOSED USE: Artesian pressure lb. per square inch. Domestic (11) WATER BEARING ZONES: Community Industrial Irrigation Thermal Injection Livestock Other 5) BORE HOLE CONSTRUCTION: Depth at which water was first found special Construction approval Yes No Depth of Completed Well Explosives used Yes No Type __ From To Estimated Flow Rate SWL HOLE SEAL Diameter From From Sacks or pounds (12) WELL LOG: How was seal placed: Method \square B \Box D \Box E Ground Elevation Backfill placed from Material Material From SWL To Gravel placed from ft. ft. to Size of gravel 2923 2925 (6) CASING/LINER: a Black Brown Red- Make 2925 2927 To Gauge Steel Plastic Welded Threaded Casing: 2928 of Quarty White Clay Grow 2954 2957 Liner: Gray Clay Gray 1957 2969 2969 2975 Final location of shoe(s) 2975 2977 PERFORATIONS/SCREENS: 2977 Perforations Method Hipy + avaite 2779 Screens Material Type Show with Room cast HARD 3004 Tele/pipe Brisall Gray Span Clay Gray 3020 From Number Diameter Casing Liner Ensall Black VES, Cinder Rediksown + Malo Green 3033 under red + Brown wat hon (3036 3036 (8) WELL TESTS: Minimum testing time is 1 hour Date started Completed (unbonded) Water Well Constructor Certification: Flowing Pump Bailer Air I certify that the work I performed on the construction, alteration, or abandonment Artesian 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 Drill stem at Yield gal/min Drawdown Time 1 hr. and belief WWC Number Signed Temperature of water Depth Artesian Flow Found (bonded) Water Well Constructor Certification: Was a water analysis done? Yes By whom I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work Did any strata contain water not suitable for intended use? Too little performed during this time is in compliance with Oregon water supply well Salty Muddy Odor Colored Other construction standards. This report is true to the best of my knowledge and belief. Depth of strata: WWC Number 13 99 Signed Wa ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

UNIO. 50687

APR 1 3 2000

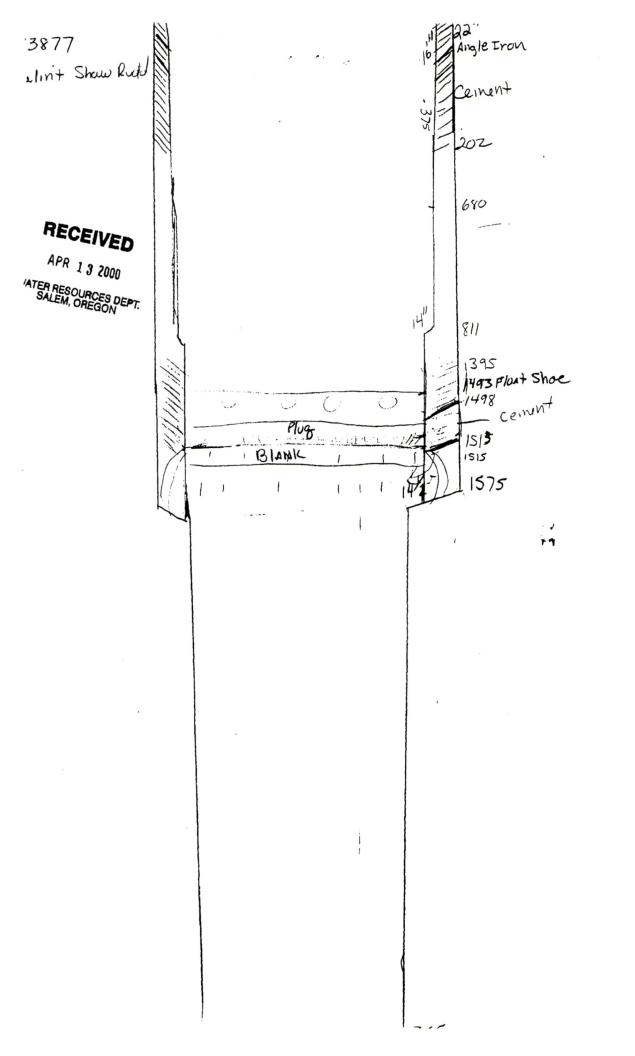
STATE OF OREGON

WATER SUPPLY WELL REPORT
(as required by ORS 537.765) (as required by ORS 537.765)

WATER RESOURCES DEPT.

Instructions for completing this report are on the last page of the ETH: OREGON WELL I.D. # L_ START CARD # N73877

(1) OWN	VER:				W	ell Nur	nber			(9) LOCAT	ION OF V	VELL by legal descr	ription:		
Name										County		Latitude	Lon	gitude	
Address										Township		N or S Range		E or W	. WM.
City				Stat	e			Zip		Section_		otBlock_		1/4	
(2) TYP										Tax Lot	L	otBlock	Su	ibdivision_	
New W			ing Alter	stion (repair/r	econdit	ion)	Abando	nment	Street Add	ress of Well	(or nearest address) _			
			ry Mud	Cabl	e	Aug	er			(10) STATIO	C WATER	LEVEL:	-		
Other		_	, _	-								w land surface.	I	Date	
(4) PRO	POSE	D USE	:								essure		re inch.	Date	
Domes	tic	Com	munity [Indu	strial		Irrigatio	n		(11) WATE	RBEARI	NG ZONES:			
Therma	al	Injec	ction	Live	stock		Other_								
(5) BOR	E HO	LE CC	INSTRUC	MON	:					Depth at which	water was	first found			
Special Co	onstruct	ion appr	roval 🗌 Yes	☐ No	Depth	n of Co	mpleted	Well _	ft.						
Explosive	s used	Yes	No Typ	e		A	mount			From		То	Estimated	Flow Rate	SWL
H	IOLE			S	EAL										
Diameter	From	То	Materia	al ,	From	То	Sack	s or pour	nds						
							L			(12) WELL	LOG:				
How was	seal plac	ced:	Method			B []c		□E		Ground	Elevation			
	я														
Backfill pl	laced fro	om	ft. to			Mater				1	Materia		From	To	SWL
Gravel pla			ft. to_		ft.	Size o	f gravel					-shale+	3038		
(6) CAS	ING/L	INER	:									SOFT	,	3043	
D	lameter	Fre	m To C	auge		Piasti	Weld	led Th	readed			com Essal Bla		3045	
Casing:		+-		-				_				shafaflag Sign		3047	
_		+		\dashv								-shak White	3047	3049	
_		+-		_								hall shap Stepas		3051	
		+-								Bratos	roff OU	the while vilicen	a 3051	3053	
Liner:		-	+	-								Gray - Quarte		2065	
						Ц		}		Bernt 1	way che	up from shaleto	3065		
Final local			Vacantan	-						l ———					
			SCREEN												
_	foration		Method							l 					
Scre	eens	Slot	Туре			Ma Tele/pi	terial_								
From	To	size		Dian	neter	size	C	asing	Liner	l 					
		+-	+	-				Ц	님	l 					
		+-		-			— ¦						_		
		+		 			<u> </u>	Н		l — —			-	 	
-		+-		 			!							 	
							\	<u> </u>							
(8) WEI	I TES	TS. N	linimum te	etino	time	e 1 ha	ur			Date started		Comme	leted		
(O) WEL	IL LES	10. IV	MINIMUM K	wing	WILLIE I	D I HO	w.				ater Wall 4	Comp Constructor Certificat			
Pum	v n		Bailer	_	Air		_	Flowin Artesia				performed on the cons		ation or abou	dones
Yield g	•		awdown	_	rill sten	n at		Tin		of this well is i	n complian	ce with Oregon water a	upply well con	nstruction sta	endande
1 reio E		<u> </u>		`			Т	11		Materials used and belief.	and inform	ation reported above an	e true to the b	est of my kn	owledge
										and control.			WWC Nun	nher	
							\top			Signed				Date	
Temperatu	re of w	ater	1	Denth	Artesia	n Flow	Found				er Well Co	nstructor Certification			
Was a wat				_	whom							for the construction, alte		ndonment w	ork
			ter not suitab					Too little		performed on t	his well dur	ing the construction da	tes reported al	bove. All we	
			Odor 🔲							construction st	ng this time andards. Ti	is in compliance with his report is true to the	Oregon water best of my kny	supply well owledge and	belief
Depth of s	_	_	, , , , , ,		_	_					. 11	/	WWC Nur	mber /_2	
	,									Signed C	all	Some		Data	



PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO:		Water	r Rights S	ection				Dat	e <u>05/30/2</u>	2018			
FROM	:	Grou	ndwater S	ection		Phillip	I. Marcy ewer's Name						
SUBJE	CT:	Appli	cation G-	18560				review of					
		11									Date of Re	view(s)	
OAR 69 welfare, to deter	90-310-1 safety as mine who umption	30 (1) 7 and heal ether the criteria	The Depart th as descr e presumpt . This revi	ibed in ORS ion is establi ew is based	resume tha 537.525. D shed. OAR upon avai l	t a propose Department 690-310- able infor	ed ground staff revi 140 allow mation a	lwater use will ew groundwate is the proposed nd agency pol	er applicat use be mo icies in pl	tions u odified lace at	nder OAl l or condi t he time	R 690-31 tioned to of evalu	0-140 meet
A. <u>GE</u>	NERAL	INFO	RMATIO	<u>ON</u> : A ₁	oplicant's N	Name:	Mauri ar	nd Cresta Deli	nt	(County: _	Union	
A1.	Applica	int(s) se	ek(s) <u>1.9</u>	5 cfs from	n <u>1</u>	well(s) in the	Grande Ro	nde				_ Basin,
						subb	asin						
A2.	Propose	ed use _	Irri	gation (156 a	acres)	Seas	onality:	March 1 st – O	ctober 31s	st			
A3.	Well an	d aquif	er data (att	ach and nu	mber logs i	for existin	g wells; r	nark proposed	l wells as	such i	under log	gid):	
Well	Logic	i	Applicant	's Propos	ed Aquifer*	Prop		Location			tion, mete		
1	UNIO 50	0687	Well #	1	Basalt	Rate		(T/R-S QQ 2S/39E-8 SE		16	' N, 1200' 50'S, 1380'	E IT NW C	or S 8
3		-											
5													
	ım, CRB,	Bedrock	ζ										
Well 1	Well Elev ft msl 2738	First Water ft bls 1540	SWL ft bls	SWL Date 03/23/2016	Well Depth (ft) 3065	Seal Interval (ft) 0-202 1395-1513	Casing Interval (ft) 0-1515	Liner Intervals (ft) NA	Perforat Or Scre (ft) 1515-1	eens	Well Yield (gpm) 1000	Draw Down (ft)	Test Type Unk.
Use data	from app	lication	for proposed	l wells.								-	
A4.					low seal de	epth, with i	numerous	water-bearing	zones rep	orted	in basalt f	low sequ	ience.
A5. 🛛	manage (Not all	ment of basin r nts:	ules contai	ter hydraulic n such provi	cally connections.)	cted to sur	face wate	rules relative t r □ are , <i>or</i> ∑	are not,	, activa	ated by th	is applica	ation.
A6. 🗌	Name o	f admin	istrative ar	ea:				tap(s) an aquif				rative res	triction.

Version: 04/20/2015

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

В	Base	d upon available data, I have determined that groundwater* for the proposed use:									
a		is over appropriated, ⊠ is not over appropriated, or □ cannot be determined to be period of the proposed use. * This finding is limited to the groundwater portion of the determination as prescribed in OAR 690-310-130;									
b		will not or will likely be available in the amounts requested without injury to prio is limited to the groundwater portion of the injury determination as prescribed in OAR									
c.		\square will not or \boxtimes will likely to be available within the capacity of the groundwater resor	irce; or								
d		will, if properly conditioned, avoid injury to existing groundwater rights or to the gr i. The permit should contain condition #(s) ii. The permit should be conditioned as indicated in item 2 below. iii. The permit should contain special condition(s) as indicated in item 3 below;									
a.		Condition to allow groundwater production from no deeper than	ft. below land surface;								
b		Condition to allow groundwater production from no shallower than	ft. below land surface;								
C.		Condition to allow groundwater production only from the groundwater reservoir between approximately ft. and land surface;	ft. below								
d		Well reconstruction is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.									
		Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc):									
C	ond	Indwater availability remarks: The proposed POA well is already measured under permittion 7N. Groundwater elevations appear stable (see attached hydrograph), with few appropriate the CRBG in the area of the proposed use.									
		nearest well producing from similar depths within the CRBG that has a long-term record is used POA well.	about five miles NW of the								
-											
_											

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. 690-09-040 (1): Evaluation of aquifer confiner

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Basalt of the Columbia River Basalt Group	\boxtimes	

Basis for aquifer confinement evaluation: Aquifers within the CRBG typically occur in interflow zones between solid, low permeability flow interiors of lava flows. This geometry provides a high degree of confinement, often producing artesian flowing pressures from deep-seated water-bearing zones, as is the case with the POA well.

C2. **690-09-040** (2) (3): Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ½ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES NO ASSUMED	Potential for Subst. Interfer. Assumed? YES NO
1	1	Grande Ronde River	2790	2678	9400		

Basis for aquifer hydraulic connection evaluation:	It is unknown to what extent, if any, that groundwater in deep Columbia
River Basalt aquifer systems contributes to surface wa	ater flows.
•	

Water Availability Basin the well(s) are located within: Grande Ronde Riv. > Snake Riv. Ab Willow Cr. (30810407).

C3a. **690-09-040** (4): Evaluation of stream impacts for <u>each well</u> that has been determined or assumed to be **hydraulically** connected and less than 1 mile from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < 1/4 mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
Comments	71		1						

Comments:	This section does not apply.

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-D	istributed	Wells											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
	Q as CFS												
Interfer	rence CFS												
Distrib	outed Well	s											
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	T	%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS	70			- 70	70	,,,	70		,,,	70	70	70
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	rence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
Well (Q as CFS												
Interfer	ence CFS												
		%	%	%	%	%	%	%	%	%	%	%	%
	Q as CFS												
Interfer	ence CFS												
(A) = Tc	otal Interf.										- Control (1991)		
	% Nat. Q												
	% Nat. Q												
(D) =	(A) > (C)	/	√	√ × × × × × × × × × × × × × × × × × × ×		1	1	V		√	/		V
	$(A) \times (C)$	%	%	%	%	%	%	%	%	%	%	%	%
(E) - (A	/ D) X 100	70	70	70	70	70	/0	/0	70	/0	70	70	/6

Geology and Ground-Water Resources of the Upper Grande Ronde River Basin, Union Co., OR, by Brown and Hampton, 1959

Date: 05/30/2018

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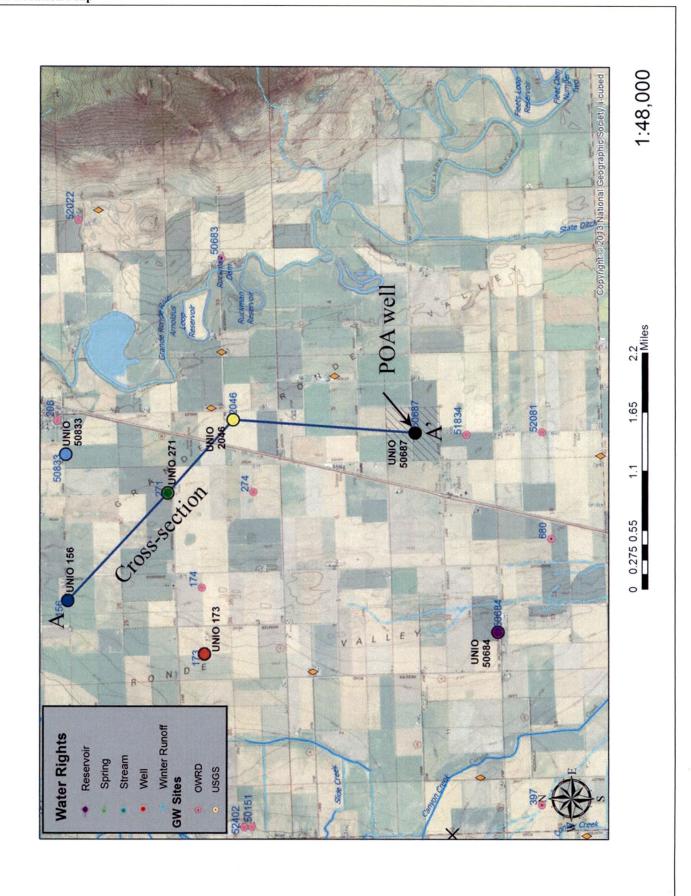
D. WELL CONSTRUCTION, OAR 690-200

D1.	Well #:	Logid:				
D2.	 a. review of the well log; b. field inspection by c. report of CWRE 	current well construction standards based upon: ;				
D3.	THE WELL construction deficiency or other comment is described as follows:					
D4.	Route to the Well Construction and	Compliance Section for a review of existing well construction.				

Water Availability Tables

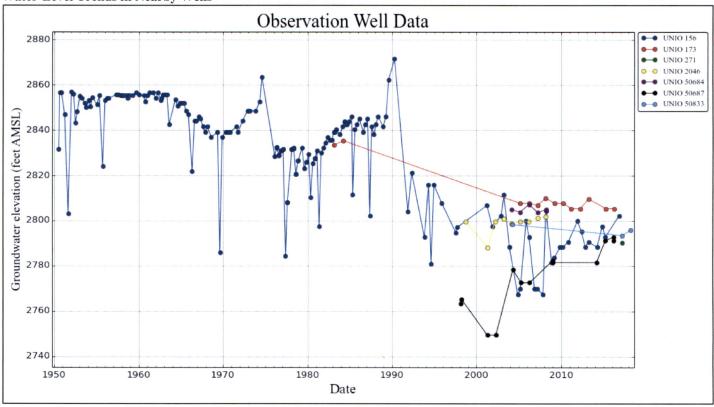
DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION									
Watershed ID # Time: 3:40 PM	: 30810407	GRANDE RONDE R > SNAKE R - AB WILLOW CR Basin: GRANDE RONDE			Exceedance Level: 80 Date: 05/30/2018				
Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available			
	Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.								
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	138.00 246.00 431.00 966.00 1,100.00 530.00 257.00 185.00 127.00 85.60 93.10	17.80 21.80 23.50 148.00 332.00 293.00 138.00 90.20 63.60 23.30 15.10	120.00 224.00 407.00 818.00 768.00 237.00 119.00 94.80 63.40 62.30 78.00	23.70 62.30 118.00 131.00 187.00 58.40 0.00 0.00 0.00 1.55 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	96.60 162.00 290.00 687.00 581.00 179.00 119.00 94.80 63.40 60.70 78.00 81.20			
ANN	429,000	71,600	358,000	35,900	0	322,000			

Well Location Map

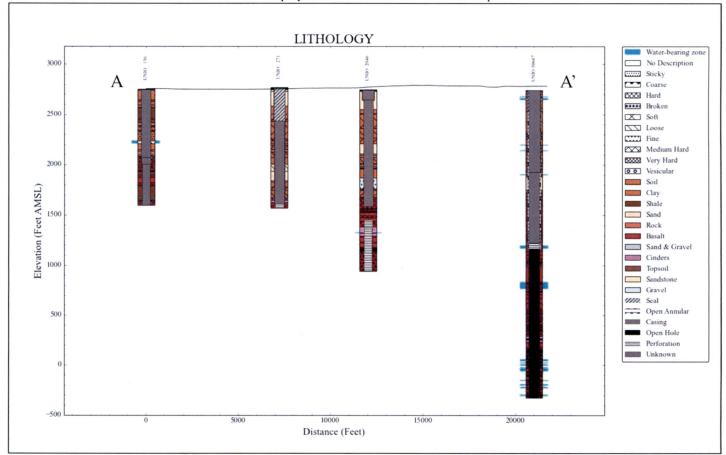


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Water-Level Trends in Nearby Wells



Water level records for wells producing from basalt in the surrounding area show similar head elevations. The POA well, UNIO 50687, is shown in black. Locations of all wells displayed here are noted on the above map.



The POA well, UNIO 50687, is open to CRBG and deeper portions of the Powder River Volcanics.