WELL RECORD 8 0 5 1 6

PWTS Permit No	
County Permit No	

lowa Department of Natural Resources – Geological Survey 109 Trowbridge Hall, Iowa City, IA 52242-1319 PH (319) 335-1575

PWTS V	Vell No.	

	37537	200										
Site id	dentificati	ion			Drill met	hod			auger _	cable	other_	
Propert	y Owner_C	ity of Carro	oll	Other ID _ Well #18	Hole size	9			hole size co	ntinued		
Address	s_112 E 5	th St., Car	roll, IA 514	401	_22_ inch	from _	0_ft to	198 <sub>ft</sub>	inc	h from	ı ft	toft
	pth 198			Date completed 08 / 03 / 15				AMAZZAZOWA				toft
					Record all de	epth mea	surements fron	n ground l	evel (GL). Us	e (+) for	above GL	measurements.
Locati	ion		County_Ca	arroll	Casing		Drive shoe	(yes/no)	Pitless	adapter ( y	es / no )	
r	mi. <sup>N</sup> and	mi. <sup>E</sup> of	intersection of	of and	Size (ID/OD)	-	Type / Wt	-	n top	Depth I	oottom	Amount (length)
	-	***			24		0 wall steel	0		126		126
1/4 of the <u>SW</u> 1/4 of the <u>SE</u> 1/4 of Sec <u>23</u> TWP <u>84</u> RNG <u>35</u> X				14		5 wall steel ro wrap SS	162		132		132	
GPS Coordinates (NAD83 datum only) decimal degrees:			2000						-	700		
_42	. 06608	3N.	Latitude	94 . 887611 W. Longitude,	14	7000	inless steel	194		198		4
Show exa	act location of v	vell in section g	rid with a dot (	Sketch map of well location on property.	Perforated / s		from			to	162	ft
Γ	II		T	N	Perforated / s	slotted	from	172			194	ft
}	- <del>i-</del> +	+		Ñ	Cooing	routod						
w		E	mile			routea	? (yes/m/o)		Placement m			
	$-\downarrow\downarrow$	44			Туре		Depth	top	Depth i	oottom		unt (vol/wt)
L			1		Neat cement	grout	0		20			yards
notes.	8			200 ft	Bentonite		20	45	126		6.5	super sacks
upland	□ hillside	□ valley □	evel surface	Elevation (if known)	Well scre Diameter	Slot s		oth top	Depth botto	ım I I	Length	Material
Forma	tion log				14	0.04			162	,,,,,	30	Stainless Ste
From	То	Color	Hardness	Formation description	14	0.02			194		22	Stainless Ste
0	6	brown	loose	Top soil and clay	Dottom conso		V	otoink	an ataal			
6	9	tan	loose	Fine to medium sand	Bottom cappe Seals / Packer				ess steel	der	oth	ft
9	20	gray/tan	dense	Sticky tan & gray clay	Gravel packed						198	
20	40	gray	dense	Sticky gray clay					#40			iper sacks
20	60	gray	dense	Sticky gray clay w/ trace of fine sa	<sub>nd</sub> Well deve	eloped'	? (yes/m\s)					
60	71	gray	dense	Sticky gray clay	Explain_DOU	ible dis	c surge blo	CK				
71	90	brown	dense	Fine to medium sand & fine grave	( pumped, air				hrs at3	00	GPM	
7.1	30	DIOWII	derise	with clay streaks	Pump inst Installer's nam							/
90	100	brown	dense	Sandy clay with sand streaks								ft
	100	DIOWII	derise	Sandy day with Sand Streaks								GPM
100	120	gray	dense	Sandy gray clay								
120	125	gray	dense	Clay	Water info				sand / gravel			
125	127	brown	hard	Hard layers and till	Main water-sup							
127	140	brown	hard	Fine & medium sandstone w/ trace	Static water level 43ft (below/above) GL;							
				of fine gravel	Pumping water level 102ft below GL;							
			use a	dditional sheets as needed	At yield ofGPM; _Morrhicevolumetricestimate forh  Measurements taken at:(AM/PM)							
Remarl	ks (including	depth of lost		, materials, or tools)	Wassers of	5094550 0.50			unan e			
					Water qua			,	Da	ate tested	8_/_	25 / 2015
Well us	e	☐ Heat	numn	☐ Commercial	Contractor Sa	argent I	Drilling					
□ Dom		☐ Mun	icipal	☐ Monitoring	Address 2016 Industrial Park Road, Carroll, IA 51401							
Elvestock & rubic supply				Driller Derek Schweitzer Certification no. 8338								

8 1 2 0 8 WELL RECORD

Iowa Department of Natural Resources – Geological Survey 109 Trowbridge Hall, Iowa City, IA 52242-1319 PH (319) 335-1575

TS We	II No.		 	
12 1/6	III NO.			

PWTS Permit No.	
county Permit No.	

Site id	entification	on			Drill met	hod		rotary $\square$ a	auger 🗆 ca	ble	other_	
Property	Owner_Cit	y of Carrol		Other ID Well #18	Hole size				hole size contin	ued		
Address	112 E 5th	St., Carro	II, IA 5140	01	inch	from	<u>0_ft</u>	toft	inch	from _	ft	toft
Tenant_					inch	from	ft	toft	inch	from	ft	to ft
Well Dep	th	ft		Date completed//				its from ground l				
Locatio	on		County		Casing			re shoe (yes/no)				
m	i <sup>N</sup> and	mi <sup>E</sup> of	ntersection (	of and	Size (ID/OD)	1	ype / V	Vt Depth	n top De	oth bott	om A	amount (length)
				4 of SecTWPRNGE	Pi -						-	
				W			1 4					
	450	3 datum only)										
	_	N.	Latitude	W. Longitude.	Perforate	d or sl	otted	casing? ()	yes / no )			
Show exac		ell in section gr	id with a dot (	Sketch map of well location on property.	Perforated / s			m				ft
Г	T I	$\Box$	T	N	Perforated / s	lotted		m				ft
-	-++	+-			Casing g	routed?	? (ves	s/no)	Placement meth	nod		
w	++	E	<u></u>	1	Туре			Depth top	Depth bot			int (vol/wt)
-	-	+-										
	S		1	200 ft								
upland	☐ hillside [	valley 🗆 le	evel surface	Elevation (if known)	Well scre	en? ()	res / no	)				
Format	ion log				Diameter	Slot s		Depth top	Depth bottom	Len	gth	Material
From	То	Color	Hardness	Formation description		0		-				
140	160	brown	hard	Fine, medium & coarse sandstone	Bottom cappe			with		1		
				w/ thin shale streaks	Seals / Packer			3 <del>-31-33</del>				ft
160	162	brown	hard	Fine, medium & coarse sandstone	1 March 1971 1971 1971 1971 1971 1971 1971 197				ft			
162	173	brown	hard	Shale with sandstone streaks				type		amour	nt	
173	180	brown	hard	Fine to medium sandstone	Well deve	loped?	( yes	s/no)				
180	194	brown	hard	Fine to medium sandstone w/	Explain( pumped, air	lifted hai	led ) f	or	hrs at	GI	PM	
				shale streaks	Pump inst						585021111	/
194	206	brown	hard	Shale				, ,				
206	207	brown	hard	Very hard	Type of pump		-		De	epth to int	ake	ft
					Pump diamete	r		Rated capa	city			GPM
					Water info	ormatio	n	Aquifer:	] sand / gravel	□ limest	one [	sandstone
					Main water-su	pply zone	from	ft	to	ft □ see	page we	ell
					Static water lev	rel	ft	(below/above)	GL; □tape □	airline 🗆	E-line	□estimate
					Pumping water	level		_ft below GL;	□tape □	airline 🗌	E-line [	estimate
			-1943	Jan alabasis as control				□ orifice □ vol				
Romark	(C (inalystics	donth of last	56,043	additional sheets as needed s, materials, or tools)	Measurements	taken at _		_: ( AM	/ PM )	Date	_/_	/
nemark	e (incinaiu)	j ueptii of iost	urning hulds	s, materials, or tools)		•		yes / no )			/_	/
Well us	е	☐ Heat	pump	☐ Commercial	Contractor							
☐ Dom		☐ Muni	cipal	☐ Monitoring ☐ Other	ContractorAddress							
☐ Livestock ☐ Public supply ☐ Other ☐ Test well ☐ Irrigation ☐ Irrigation				Driller Certification no								

## WELL RECORD 8 0 5 1 6 PWTS Well No.

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PWTS Permit No	
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Site identification	Drill method
Property Owner City of Carroll, IA Other ID Well #18	Hole size hole size continued
Address 112 E 5th St., Carroll, IA 51401	inch from 0 ft toft inch fromft toft
Tenant	
Well Depth 198 ft Date completed 8 / 03 / 15	inch fromft toftinch fromft toft
Location County	Record all depth measurements from ground level (GL). Use (+) for above GL measurements.
Location County	Casing Drive shoe (yes / no) Pitless adapter (yes / no) Size (ID/OD)   Type / Wt   Depth top   Depth bottom   Amount (length)
mi. N andmi. E of intersection of and	Oize (ID/OD) Type / W. Boptil top Boptil Tools   Section   Section
1/4 of the1/4 of the1/4 of SecTWPRNGE	
GPS Coordinates (NAD83 datum only) decimal degrees:	
	Perforated or slotted casing? (yes / no)
Show exact location of well in section grid with a dot ( ●). Sketch map of well location on property.	Perforated / slotted fromft toft
N N	Perforated / slotted fromft toft
	Casing grouted? (yes / no ) Placement method
W E E	Type   Depth top   Depth bottom   Amount (vol/wt)
├ + + + -	
S 200 ft	
□ upland □ hillside □ valley □ level surface Elevation (if known)	Well screen? (yes/no)
	Diameter Slot size Depth top Depth bottom Length Material
From To Color Hardness Formation description	0
	0
	Bottom capped (yes / no ) with
	Seals / Packers (yes / no) kinddepthft
	Gravel packed (yes / no)         fromft         toft           typeamount         amount
	Well developed? (yes/no)
	Explain (yes / no )
	( pumped, airlifted, bailed ) for hrs at GPM
	Pump installed? (yes/pox Date 10 / 05 / 2015
	Installer's name Kenneth Mohr
	Type of pump Goulds Depth to intake 125 ft
	Pump diameter 6" Rated capacity 500 GPM
	Water information Aquifer: ☐ sand / gravel ☐ limestone ☐ sandstone
	Main water-supply zone fromft toft □ seepage well
	Static water levelft ( below / above ) GL;
	Pumping water levelft below GL;
	At yield ofGPM;
use additional sheets as needed	Measurements taken at : ( AM / PM ) Date / /
Remarks (including depth of lost drilling fluids, materials, or tools)	Water quality test? (yes/no) Date tested//
	Tested by
Well use	
Heat pump Commercial  Domestic Municipal Monitoring	Contractor Sargent Drilling  Address PO Box 634, 2016 Industrial Park Road, Carroll, IA 51401
☐ Livestock         ☐ Public supply         ☐ Other           ☐ Test well         ☐ Irrigation	Driller Derek Schweitzer Certification no. 8338
	Dilliei