

**Site Identification** W2014-0563

Property Owner Community Orchard Other ID \_\_\_\_\_  
 Address 2237 160th St Fort Dodge  
 Tenant \_\_\_\_\_  
 Well Depth 1640 ft Date completed 7/27/15

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**Location** County Webster

mi. <sup>n</sup>/<sub>s</sub> and mi. <sup>w</sup>/<sub>e</sub> of intersection of \_\_\_\_\_ and \_\_\_\_\_  
 1/4 of the 1/4 of the 1/4 of Sec \_\_\_\_\_ TWP \_\_\_\_\_ RNG \_\_\_\_\_

GPS Coordinates (NAD83 datum only) decimal degrees:  
 \_\_\_\_\_ N. Latitude \_\_\_\_\_ W. Longitude \_\_\_\_\_

Show exact location of well in section grid with a dot (•). Sketch map of well location on property.

upland  inside  valley  level surface  barrier (if known) \_\_\_\_\_

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**Formation log**

From	To	Color	Hardness	Formation description
0	1	Black	S	topsoil
1	19	yellow	S	Clay
19	47	Blue	S	Clay
47	54	Brown	S	Clay
54	61	Gray	S	Clay
61	67	yellow	S	Clay
67	72	dark gray	S	oil shale
72	75	red	S	Clay
75	82	red gray	S	Clay
82	98	red	S	Clay
98	104	green white	S	Shale
104	110	white tan	MH	limestone
110	114	gray	S	Shale
114	118	tan	MH	limestone

use additional sheets as needed

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**Remarks** (including depth of lost drilling fluids, materials, or tools)

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**Well use**

<input type="checkbox"/> Domestic	<input type="checkbox"/> Heat pump	<input type="checkbox"/> Commercial
<input type="checkbox"/> Livestock	<input type="checkbox"/> Municipal	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Test well	<input checked="" type="checkbox"/> Public supply	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Irrigation	

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**Drill method**  rotary  auger  cable  other \_\_\_\_\_

**Hole size**  
 1 1/8 inch from 0 ft to 237 ft  
 5/8 inch from 237 ft to 1640 ft

Record all depth measurements from ground level (GL). Use (+) for above GL measurements.

**Casing** Driveline (yes/no) \_\_\_\_\_ Piless adapter (yes/no) \_\_\_\_\_

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
6.9	PVC250	+1	237	232

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**Perforated or slotted casing?** (yes/no)

Perforated / slotted from \_\_\_\_\_ ft to \_\_\_\_\_ ft  
 Perforated / slotted from \_\_\_\_\_ ft to \_\_\_\_\_ ft

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**Casing grouted?** (yes/no)  Placement method pumped

Type	Depth top	Depth bottom	Amount (vol/wt)
Neat cement	233	237	1 batch 500 lbs
Penseal	0	233	20 bags

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**Well screen?** (yes/no)

Diameter	Slot size	Depth top	Depth bottom	Length	Material
0					
0					

Bottom capped (yes/no)  with \_\_\_\_\_  
 Seals / Packers (yes/no)  kind \_\_\_\_\_ depth \_\_\_\_\_ ft  
 Gravel packed (yes/no)  from \_\_\_\_\_ ft to \_\_\_\_\_ ft  
 type \_\_\_\_\_ amount \_\_\_\_\_

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**Well developed?** (yes/no)

Explain \_\_\_\_\_  
 (pumped, drilled, bailed) for 1 hrs at 50 GPM

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**Pump installed?** (yes/no)  Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Installer's name \_\_\_\_\_  
 Type of pump \_\_\_\_\_ Depth to intake \_\_\_\_\_ ft  
 Pump diameter \_\_\_\_\_ Rated capacity \_\_\_\_\_ GPM

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**Water information** Aquifer:  sand / gravel  limestone  sandstone

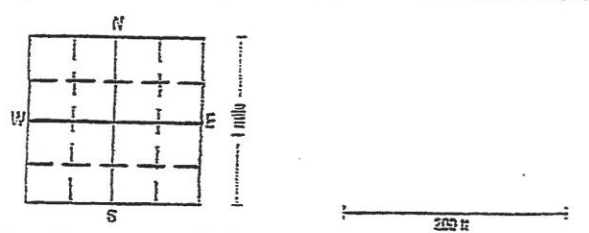
Main water-supply zone from 330 ft to 351 ft  seepage well  
 Static water level 102 ft (below/above) GL;  tape  airline  E-line  estimate  
 Pumping water level 220 ft below GL;  tape  airline  E-line  estimate  
 At yield of 50 GPM;  orifice  volumetric  estimate for 1 hours  
 Measurements taken at 3:00 (AM/PM) Date 7/27/15

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**Water quality test?** (yes/no) \_\_\_\_\_ Date tested \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 Tested by \_\_\_\_\_

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Contractor Schumacher well  
 Address 2201 Stagle Dr Algona  
 Driller Jeremy Walker Certification no. 6087

<b>Site identification</b> <span style="float: right;">W2014-0563</span> Property Owner <u>Community Orchard</u> Other ID _____ Address _____ Tenant _____ Well Depth _____ ft Date completed ____/____/____		<b>Drill method</b> <input type="checkbox"/> rotary <input type="checkbox"/> auger <input type="checkbox"/> cable other _____ <b> Hole size</b> _____ inch from _____ ft to _____ ft _____ inch from _____ ft to _____ ft _____ inch from _____ ft to _____ ft _____ inch from _____ ft to _____ ft Record all depth measurements from ground level (GL). Use (+) for above GL measurements.																																																																																														
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_____		<b>Water information</b> Aquifer: <input type="checkbox"/> sand / gravel <input type="checkbox"/> limestone <input type="checkbox"/> sandstone Main water-supply zone from _____ ft to _____ ft <input type="checkbox"/> seepage well Static water level _____ ft (below/above) GL; <input type="checkbox"/> tape <input type="checkbox"/> airline <input type="checkbox"/> E-line <input type="checkbox"/> estimate Pumping water level _____ ft below GL; <input type="checkbox"/> tape <input type="checkbox"/> airline <input type="checkbox"/> E-line <input type="checkbox"/> estimate At yield of _____ GPM; <input type="checkbox"/> orifice <input type="checkbox"/> volumetric <input type="checkbox"/> estimate for _____ hours Measurements taken at _____ (AM/PM) Date ____/____/____																																																																																														
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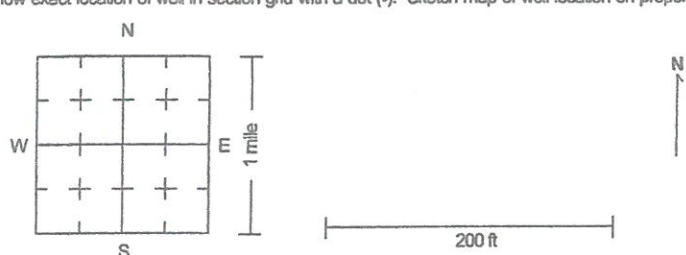
WELL RECORD FORM

30f 5

2015-0410  
 PWTS No. or PWS No. \_\_\_\_\_ PWTS Permit No. 9433203 GEOSAM Well No. (IGS use only) \_\_\_\_\_

**Site Identification** W2014-0563  
 Property owner Community Orchard Other ID \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_  
 Tenant \_\_\_\_\_  
 Well depth \_\_\_\_\_ ft Date completed \_\_\_\_/\_\_\_\_/\_\_\_\_

**Drill Method**  Rotary  Auger  Cable  Other \_\_\_\_\_  
**Hole size** \_\_\_\_\_ inch from 0 ft to \_\_\_\_\_ ft  
 \_\_\_\_\_ inch from \_\_\_\_\_ ft to \_\_\_\_\_ ft

**Location** County \_\_\_\_\_  
 GPS coordinates (NAD83 datum)  
 Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Decimal Degrees  Degrees, Decimal Minutes  Degrees, Minutes, Seconds  
 E \_\_\_\_\_ W \_\_\_\_\_  
 1/4 of the 1/4 of the 1/4 of Sec \_\_\_\_\_ TWP \_\_\_\_\_ RNG \_\_\_\_\_  
 Show exact location of well in section grid with a dot (+). Sketch map of well location on property.  


**Casing or Loop Pipe**  
 Record all depth measurements from ground level (GL). Use + for above GL measurements.

Size (in)	Material	Depth Top	Depth Bottom	Perforated	Slotted	Screen
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____

**Casing Grout** Placement method \_\_\_\_\_

Type	Depth Top	Depth Bottom	Amount (vol/wt)

Gravel packed variety \_\_\_\_\_  
 Seals/packers

**Formation Log**

From	To	Color	Hardness	Formation description
210	216	tan	MH	Limestone
216	222	light gray	softer	Shale
222	225	blue gray	MH	Limestone
225	229	white	MH-M	Limestone: Shale
229	247	light brown	MH	Limestone
247	291	white	MH	Limestone
291	313	brown	MH	Limestone
313	320	white	MH	Limestone
320	351	brown	softer	Dolomite little water
351	351 1/2	blue green	S	Shale
351 1/2	354	gray brown	MH	Limestone
354	363	brown	MH	Dolomite
363	380	brown	MH	Limestone
380	384	brown	softer	Sandstone
384	390	white	MH	Limestone
390	402	white brown	softer	Dolomite: Quartz shales

(use additional sheets as needed)

**Pump Installation** Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Type of pump \_\_\_\_\_ Depth to intake \_\_\_\_\_ ft  
 Pump diameter \_\_\_\_\_ in Rated capacity \_\_\_\_\_ GPM

**Water Information** Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Use + for above GL measurements.

Static Water Level	Pumping Water Level	Yield	Duration
_____ ft	_____ ft	_____ GPM	_____ hrs

Water level measurement:  Sonic  Tape  Airline  E-line  Estimate  
 Water yield measurement:  Orifice  Volumetric  Estimate  
 Main water-supply zone from \_\_\_\_\_ ft to \_\_\_\_\_ ft below GL

**Well Development**  
 Physical explain: \_\_\_\_\_  
 Chemical explain: \_\_\_\_\_

**Remarks** (including depth of lost drilling fluids, materials, or tools)

**Contractor**  
 Company Schumacher well  
 Address \_\_\_\_\_  
 Driller J Walker Certification no. 6087

**Well Use**  
 Domestic  Public supply  Livestock  
 Heat pump  Commercial  Irrigation  
 # of borehole(s) \_\_\_\_\_  Monitoring  Other \_\_\_\_\_

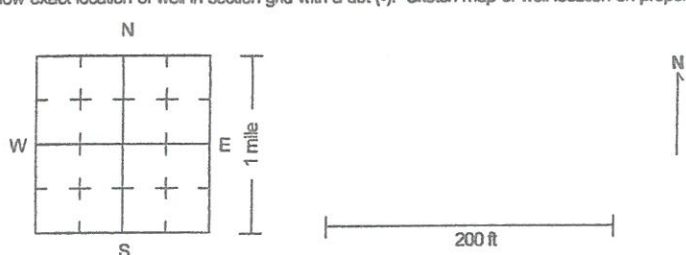
WELL RECORD FORM

4 of 5

PWTS No. or PWS No. 2015.0410 PWTS Permit No. 9433203 GEOSAM Well No. (IGS use only) \_\_\_\_\_

**Site Identification**  
 Property owner Community Orchard Other ID W2014-0563  
 Address \_\_\_\_\_ City \_\_\_\_\_  
 Tenant \_\_\_\_\_  
 Well depth \_\_\_\_\_ ft Date completed \_\_\_\_/\_\_\_\_/\_\_\_\_

**Drill Method**  Rotary  Auger  Cable  Other \_\_\_\_\_  
**Hole size**  
 \_\_\_\_\_ inch from 0 ft to \_\_\_\_\_ ft  
 \_\_\_\_\_ inch from \_\_\_\_\_ ft to \_\_\_\_\_ ft

**Location** County \_\_\_\_\_  
 GPS coordinates (NAD83 datum)  
 \_\_\_\_\_ Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Decimal Degrees  Degrees, Decimal Minutes  Degrees, Minutes, Seconds  
 \_\_\_\_\_ 1/4 of the \_\_\_\_\_ 1/4 of the \_\_\_\_\_ 1/4 of Sec \_\_\_\_\_ TWP \_\_\_\_\_ RNG \_\_\_\_\_  
 Show exact location of well in section grid with a dot (.). Sketch map of well location on property.  


**Casing or Loop Pipe**  
 Record all depth measurements from ground level (GL). Use + for above GL measurements.

Size (in)	Material	Depth Top	Depth Bottom	Perforated	Slotted	Screen
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
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				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____

**Casing Grout** Placement method \_\_\_\_\_

Type	Depth Top	Depth Bottom	Amount (vol/wt)

Gravel packed variety \_\_\_\_\_  
 Seals/packers

**Formation Log**

From	To	Color	Hardness	Formation description
402	406	gray	MH	Limestone
406	420	light brown	MH	Limestone
420	421	gray	MH	Limestone
421	428	light brown	MH	Dolomite
428	438	gray brown	MH	Limestone
438	440	gray	M-MH	Limestone
440	442	gray brown	MH	Limestone
442	444	brown	MH	Limestone
444	456	gray	MH	Limestone
456	463	tan	MH	Limestone
463	494	tan gray	MH	Limestone
494	510	brown gray	MH-H	Limestone
510	519	blue green	M-MH	Sand + Sandstone
519	526	blue gray	softer	Sandstone
526	543	tan	MH	Dolomite
543	551	tan gray	softer	Sandstone some water

(use additional sheets as needed)

**Pump Installation** Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Type of pump \_\_\_\_\_ Depth to intake \_\_\_\_\_ ft  
 Pump diameter \_\_\_\_\_ in Rated capacity \_\_\_\_\_ GPM

**Water Information** Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Use + for above GL measurements.

Static Water Level	Pumping Water Level	Yield	Duration
_____ ft	_____ ft	_____ GPM	_____ hrs

Water level measurement:  Sonic  Tape  Airline  E-line  Estimate  
 Water yield measurement:  Orifice  Volumetric  Estimate  
 Main water-supply zone from \_\_\_\_\_ ft to \_\_\_\_\_ ft below GL

**Well Development**  
 Physical explain: \_\_\_\_\_  
 Chemical explain: \_\_\_\_\_

**Remarks** (including depth of lost drilling fluids, materials, or tools)  
 \_\_\_\_\_

**Contractor**  
 Company Schumacher Well  
 Address \_\_\_\_\_  
 Driller J Walker Certification no. 6087

**Well Use**  
 Domestic  Public supply  Livestock  
 Heat pump  Commercial  Irrigation  
 # of borehole(s) \_\_\_\_\_  Monitoring  Other \_\_\_\_\_

