

WELL RECORD FORM

PWSID# or PWTS No. <u>8474097</u>	PWTS Permit No. <u>20230540</u>	GeoSam WNumber (IGS use only) _____
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Site Identification

Property owner City of Orange City Other ID SW-4
 Address 125 Central Ave. Southeast City Orange City
 Tenant _____
 Well depth 420 ft Date completed 9 / 25 / 2023

Location County Sioux

GPS coordinates (NAD83 datum)
42.9234500 Latitude 96.1444530 Longitude
 Decimal Degrees Degrees, Decimal Minutes Degrees, Minutes, Seconds
1/4 of the NE 1/4 of the 34 TWP 94 RNG 45 ^E _W
 Show exact location of well in section grid with a dot (.). Sketch map of well location on property.

Formation Log

From	To	Color	Hardness	Formation description
0	20	Brown		Top soil and brown clay
20	40	Multi		Brown, gray and yellow clay
40	60	Multi		Yellow, brown clay
60	80	Brown		Clay with rocks
80	100	Multi		Brown and clay with rocks
100	140	Gray		Clay with rocks
140	160	Multi		Gray and brown clay with rocks
160	180	Multi		Gray and blue clay with rocks
180	200	Multi		Blue and brown clay with rocks
200	209	Brown		Clay with rocks and sand and gravel layers and rocks
209	220	Gray		Clay with rocks
220	240	Multi		Gray and brown clay with sand and gravel layers and rocks
240	245	Brown		Clay
245	260			FMS with some CS and FG (use additional sheets as needed)

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

Well Use

Domestic Public supply Livestock
 Heat pump Commercial Irrigation
 # of borehole(s) _____ Monitoring Other _____

Drill Method Rotary Auger Cable Other _____

Hole size
22 inch from 0 ft to 420 ft
 _____ inch from _____ ft to _____ ft

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
14	Steel .375	0	320	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
14	Stainless Steel	320	340	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
14	Johnson SS	340	420	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size <u>.025</u>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
<input checked="" type="checkbox"/> Gravel packed		330	420	amount <u>18yds</u> variety <u>Chlorinate</u>		
<input type="checkbox"/> Seals/packers				type _____		
<input type="checkbox"/> Bottom capped with <u>Chlorinate</u>						

Casing Grout Placement method _____

Type	Depth Top	Depth Bottom	Amount (vol/wt)
Cement Grout	0	30	18 yds
Bentonite Seal	30	330	5 SS

Pump Installation Date 5 / 20 / 2024

Type of pump Grundfos Depth to intake 335 ft
 Pump diameter 8 in Rated capacity 1100 GPM

Water Information Date 9 / 25 / 2023

Static Water Level	Pumping Water Level	Yield	Duration
<u>151</u> ft	<u>208</u> ft	<u>1324</u> GPM	<u>2.00</u> 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: Double disk surge block piping
 Chemical explain: _____

Contractor

Company Sargent Drilling
 Address 2016 Industrial Park Road, Carroll, IA 51401
 Driller Derek Schweitzer Certification no. 8338

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Formation Log

From	To	Color	Hardness	Formation description
260	279			FMCS and F to MG with clay strips and rocks
279	280	Black		Shale
280	300	Multi		Black and gray shale with sandstone layers and rocks
300	320	Gray		Shale with hard strips
320	340	Multi		Gray shale and white shale
340	360	Gray		Shale with rocks
360	371	Gray		Shale with sandstone layer
372	380	Gray		Shale with sandstone layer
380	400			Sandstone with hard cemented strips and gray shale layers
400	408			Sandstone
408	409		Hard	Cemented sandstone
409	410			Shale
410	420			Sandstone with shale layers (use additional sheets as needed)

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

Well Use

Domestic Public supply Livestock
 Heat pump Commercial Irrigation
 # of borehole(s) _____ Monitoring Other _____

Drill Method Rotary Auger Cable Other _____

Hole size
 _____ inch from 0 ft to _____ ft
 _____ inch from _____ ft to _____ ft

hole size continued
 _____ inch from _____ ft to _____ ft
 _____ inch from _____ ft to _____ ft

Casing or Loop Pipe
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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 _____
				<input type="checkbox"/> Gravel packed amount _____ variety _____		
				<input type="checkbox"/> Seals/packers type _____		
				<input type="checkbox"/> Bottom capped with _____		

Casing Grout Placement method _____

Type	Depth Top	Depth Bottom	Amount (vol/wt)

Pump Installation Date _____ / _____ / _____

Type of pump _____ Depth to intake _____ ft
 Pump diameter _____ in Rated capacity _____ GPM

Water Information Date _____ / _____ / _____

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: _____

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From	To	Color	Hardness	Formation description
420	425	White		Shale
425	428			Sandstone
428	435	White		Shale with some ochre
435	440			Sandstone
440	460			Sandstone with shale strips
460	487			Sandstone
487	495	White		Shale
495	510			Sandstone
510	520	Multi		White and gray shale
520	540	Multi		White and red shale
(use additional sheets as needed)				

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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 _____
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> slot size _____
				<input type="checkbox"/> Gravel packed amount _____ variety _____		
				<input type="checkbox"/> Seals/packers type _____		
				<input type="checkbox"/> Bottom capped with _____		

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