WELL RECORD FORM

91788

PWSID# or PWTS No. IA7736011 | PWTS Permit No. ~~2019-0127~~ 2019-0127W | GeoSam WNumber (IGS use only)

Site Identification

Property owner City of Grimes | Other ID 202

Address 101 NE Harvey St | City Grimes

Tenant

Well depth 2471 ft | Date completed 7 / 20 / 2019

Drill Method

☑ Rotary ☐ Auger ☐ Cable ☐ Other

Hole size

36 inch from 0 ft to 327 ft

28 inch from 327 ft to 718 ft

hole size continued

23 inch from 718 ft to 2094 ft

16 inch from 2094 ft to 2471 ft

Location

County Polk

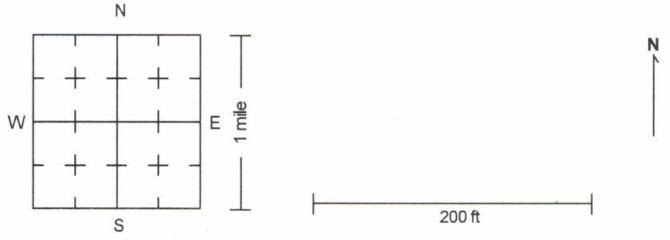
GPS coordinates (NAD83 datum)

41° 43' 19.7" N Latitude | 93° 47' 1.4" W Longitude

☐ Decimal Degrees ☐ Degrees, Decimal Minutes ☑ Degrees, Minutes, Seconds

____ 1/4 of the ____ 1/4 of the ____ 1/4 of Sec ____ TWP ____ RNG ____ E W

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
30	Steel	0	327	☐	☐	☐ slot size
24	Steel	+2	718	☐	☐	☐ slot size
18	Steel	718	2094	☐	☐	☐ slot size
				☐	☐	☐ slot size
				☐	☐	☐ slot size
☐ Gravel packed				amount	variety	
☐ Seals/packers				type		
☐ Bottom capped	with					

Formation Log

From	To	Color	Hardness	Formation description
				See Attached Sheets

(use additional sheets as needed)

Casing Grout

Placement method Halliburton method

Type	Depth Top	Depth Bottom	Amount (vol/wt)
Neat Cement	0	2094	

Pump Installation

Date ____/____/____

Type of pump ____ Depth to intake ____ ft

Pump diameter ____ in Rated capacity ____ GPM

Water Information

Date 8 / 19 / 2019

Static Water Level	Pumping Water Level	Yield	Duration
296 ft	380 ft	3100 GPM	72.00 hrs

Water level measurement: ☐ Sonic ☐ Tape ☐ Airline ☐ E-line ☐ Estimate

Water yield measurement: ☐ Orifice ☑ Volumetric ☐ Estimate

Main water-supply zone from 2094 ft to 2471 ft below GL

Well Development

☑ Physical explain: Airlift / pump surge

☐ Chemical explain:

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

Contractor

Company Grosch Drilling Co.

Address 114 N 6th St O'Neill NE 68763

Driller Scott Grosch Certification no. 6743

Well Use

☐ Domestic ☑ Public supply ☐ Livestock

☐ Heat pump ☐ Commercial ☐ Irrigation

# of borehole(s) ____ ☐ Monitoring ☐ Other ____

IGS IIHR Hydroscience & Engineering The University of Iowa

See back for submittal information

DNR

DNR Form 542-8170

Rev. 2017

Grosch Drilling Co.
Silver Creek, Nebraska

New Jordan Well - City of Grimes Iowa

Well 202 Lithology Log

41 43' 19.7"N 97 47' 1.4"W
Ground elevation during construction- 847'

1	**-**	**4**	Clay Top Soil - Black - Fine sand w/ clay streaks
4	**-**	**20**	clay ? Drilled slow
20	**-**	**40**	Sand & Gravel
40	**-**	**79**	Sand & Gravel w/ Cobbles
79	**-**	**97**	Hard Clay
97	**-**	**100**	Softer Red Clay
100	**-**	**130**	Blue Sticky Clay
130	**-**	**232**	Black Shale - Rock @ 132'
232	**-**	**233**	Rock
233	**-**	**317**	Gray Shale
317	**-**	**340**	Gray Hard Limestone
340	**-**	**365**	Brown Hard Limestone
365	**-**	**370**	Sticky Shale
370	**-**	**401**	Dark Shale Firm & Gritty
401	**-**	**417**	Brown Limestone w/ traces of shale
417	**-**	**437**	Limestone w/ layers of Shale w/ traces of siltstone
437	**-**	**502**	Gray Limestone w/ dark gray Shale
502	**-**	**508**	Mudstone/Siltstone
508	**-**	**513**	Tan Sandstone
513	**-**	**516**	Limestone w/ anhydrite
516	**-**	**531**	Tan sandstone w/ streaks of Anhydrite & fossils
531	**-**	**559**	Hard Gray Limestone
559	**-**	**616**	Chent & dolomite
616	**-**	**639**	Dolomite w/ brown shale
639	**-**	**659**	Red/Brown Shale
659	**-**	**693**	Brown Shale w/ Dolomite 50/50
693	**-**	**728**	Light Gray Limestone
728	**-**	**810**	Light Gray Limestone w/ Anhydrite Layers
810	**-**	**814**	Gray Limestone w/ Shale - Mudstone
814	**-**	**817**	Light Gray Limestone w/ Gray Dolomite
817	**-**	**842**	Limestone & Dolomite w/ Traces of Shale
842	**-**	**908**	Light Gray Limestone & Dark Gray Dolomite w/ traces of Anhydrite

Grosch Drilling Co.
Silver Creek, Nebraska

908	-	**913**	Gray Limestone w/ traces of Shale
913	-	**1218**	Brown Dolomite w/ Limestone & Anhydrite traces
1218	-	**1260**	Bown & Gray Dolomite w/ Anhydrite Layers
1260	-	**1344**	Brown - Switch to Gray Limestone w/ Layers of Gray Shale
1344	-	**1376**	Tan - Light Brown Dolomite/Anhydrite
1376	-	**1380**	Light Brown & Gray Dolomite w/ Anhydrite
1380	-	**1410**	Light Brown & Gray Dolomite w/ Anhydrite w/ Red Shale
1410	-	**1425**	Brown & Tan Dolomite w/ Gray Shale
1425	-	**1475**	Mostly Shale Light & Dark Gray
1475	-	**1503**	Brown & Tan Dolomite w/ Anhydrite
1503	-	**1534**	Brown & Gray Dolomite
1534	-	**1645**	Brown & Gray Dolomite w/ Traces of Brown Shale
1645	-	**1743**	Brown & Gray Dolomite
1743	-	**1840**	Brown Dolomite w/ Chert
1840	-	**1862**	Brown & Gray Dolomite w/ Chert
1862	-	**1907**	Tan & Gray Dolomite w/ Shale Greenish Blue
1907	-	**1945**	St. Pete Sandstone
1945	-	**2100**	Dolomite, Chert, sandstone
2100	-	**2170**	Dolomite, Chert
2170	-	**2184**	White Sandstone Fairly Soft
2184	-	**2212**	Gray Dolomite
2212	-	**2217**	White Sandstone
2217	-	**2260**	Gray Dolomite w/ Steaks of Sandstone
2260	-	**2288**	Dolomite, chert
2288	-	**2289**	Brown Sandstone
2289	-	**2420**	Gray Dolomite w/ Traces of Fine White Sand
2420	-	**2433**	Gray Dolomite w/ Some Brown Dolomite
2433	-	**2471**	Gray Dolomite w/ Trace of Fine White/Gray Sand