WELL RECORD FORM

PWTS No. or PWS No. 2424027 | Project No. W2015-0432 | PWTS Permit No. 2016-0361W | GEOSAM Well No. (IGS use only) 85932-

Site Identification

Facility ID: WL18

Property owner Denison Municipal Utilities | Other ID Well #16

Address 721 Broadway | City Denison, IA

Tenant Denison Municipal Utilities

Well depth 59 ft (59' from grade, 67.3' top of casing) | Date completed 4 / 27 / 2017

Drill Method

☐ Rotary ☐ Auger ☐ Cable ☐ Other Reverse

Hole size

48 inch from 0 ft to 59 ft

____ inch from ____ ft to ____ ft

hole size continued

____ inch from ____ ft to ____ ft

____ inch from ____ ft to ____ ft

Location

County Crawford

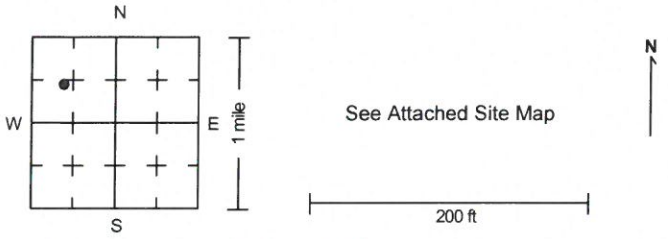
GPS coordinates (NAD83 datum)

42.0331140 Latitude | -95.3605720 Longitude

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

NE 1/4 of the SW 1/4 of the NW 1/4 of Sec 2 TWP 83 RNG 39 (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
24	Steel casing	+8.3'	39'	☐	☐	☐ slot size ____
24	SST screen	39'	59'	☐	☐	☑ slot size 0.070
				☐	☐	☐ slot size ____
				☐	☐	☐ slot size ____
				☐	☐	☐ slot size ____

Casing Grout

Placement method Pressure tremie

Type	Depth Top	Depth Bottom	Amount (vol/wt)
Neat Cement	0	16	7 cyd
☑ Gravel packed variety RF #70	35	59	15 tons
☑ Seals/packers (Bentonite seal)	16	35	263 bags

Formation Log

From	To	Color	Hardness	Formation description
0	9	Brown		Top soil
9	17	Brown		Clay
17	19	Brown		Clay w/mix coarse sand & silt
19	25	Brown		Clay w/mix sand & gray clay
25	36	Gray		Sand w/clay stringers
36	53			Sand, gravel & cobbles
53	59			Large gravel w/mixed sand
				(use additional sheets as needed)

Pump Installation

Date 4 / 27 / 2017

Type of pump Vertical Turbine | Depth to intake 48 ft

Pump diameter 11 in | Rated capacity 500 GPM

Water Information

Date 9 / 22 / 2016

Use + for above GL measurements.

Static Water Level	Pumping Water Level	Yield	Duration
20 ft	33 ft	600 GPM	24.00 hrs

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

Water yield measurement: ☑ Orifice ☐ Volumetric ☐ Estimate

Main water-supply zone from 39 ft to 59 ft below GL

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

Well Development

☑ Physical explain: Surge block, bailer, rawhide pumping, etc.

☐ Chemical explain: ____

Well Use

☐ Domestic ☑ Public supply ☐ Livestock

☐ Heat pump ☐ Commercial ☐ Irrigation

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

Contractor

Company Layne Christensen Company

Address 3150 SE Gateway Drive, Suite B

Driller Mark Leslie | Certification no. 3684

IGS IIHR Hydroscience & Engineering

Mail form to **Iowa Geological Survey**: 100 Oakdale IGS, Iowa City, IA 52242-1304

Or click here to e-mail form to: IIHR-IGS-WellRecords@uiowa.edu

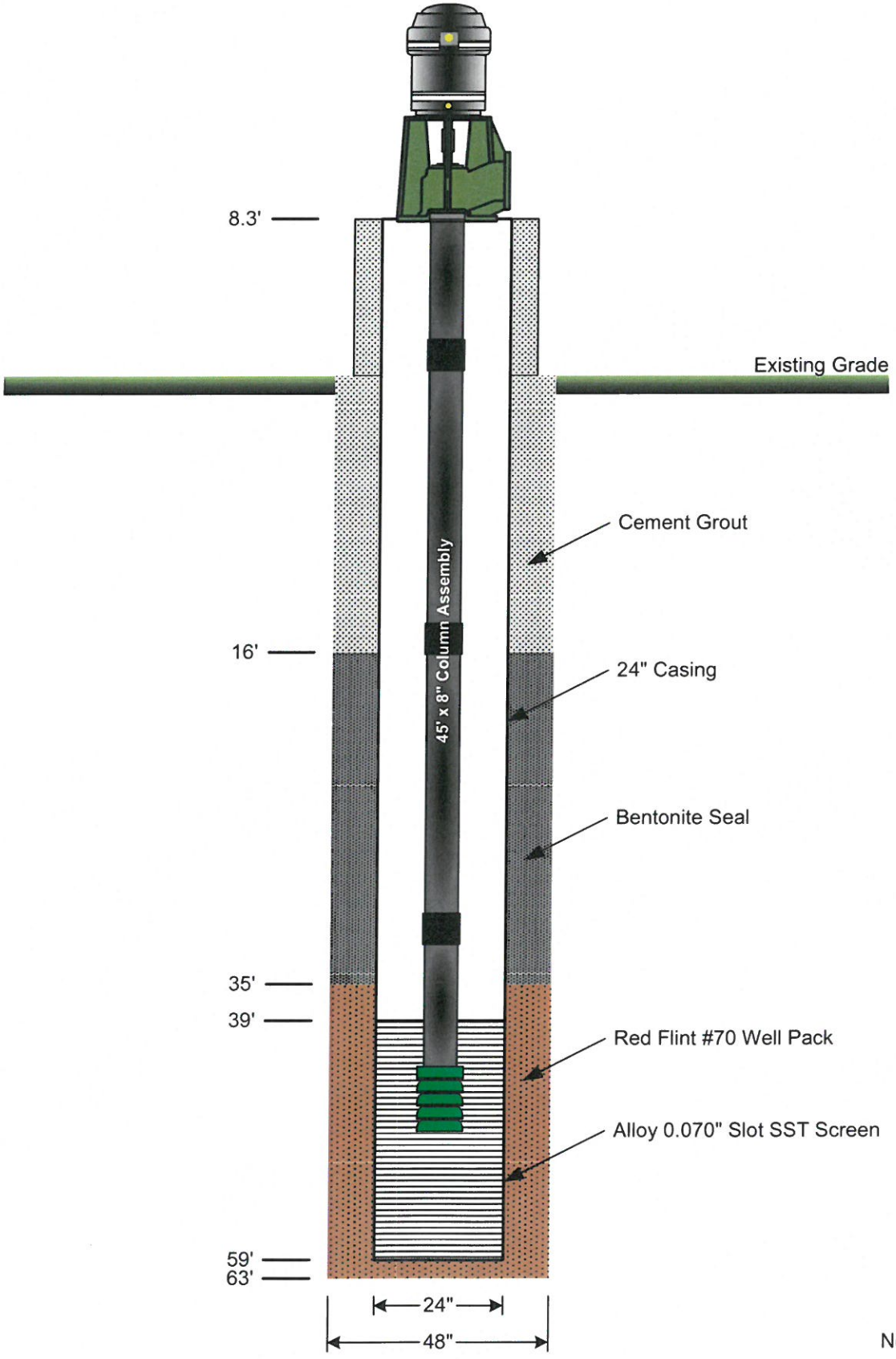
Make copies for: **well contractor, customer, and county health department**

The University of Iowa

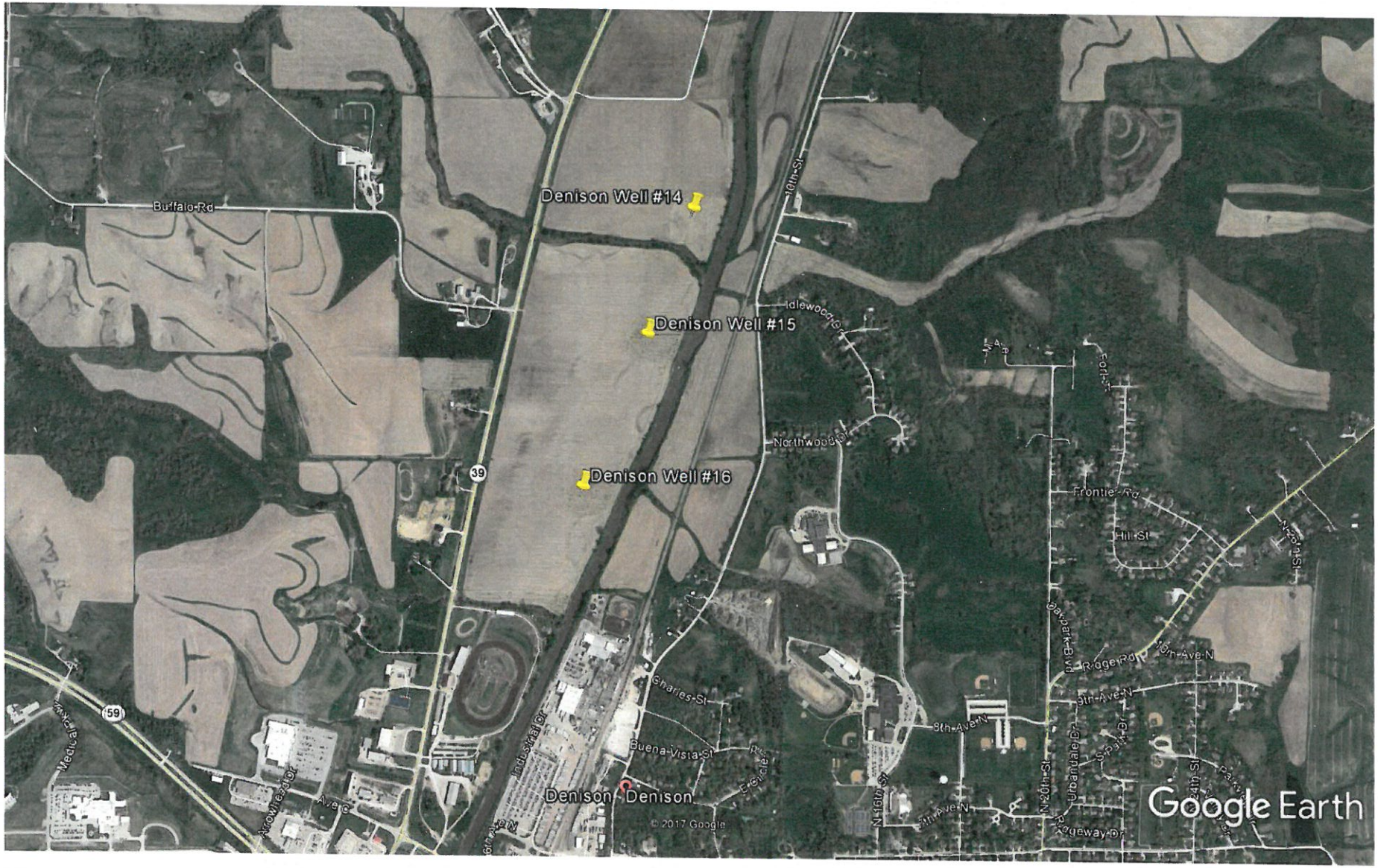
6-29-2017

Rev. 2014

Well #16 As-Built Drawing
Denison Municipal Utilities
Completed April 27, 2017



Not To Scale



Google Earth

miles 1

km 2