

799934

County Mower
Quad Austin East
Quad ID 8B

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date07/13/2016
Update Date10/26/2017
Received Date06/29/2016

Well Name RETTERATH,	Township 103	Range 18	Dir W	Section 10	Subsection BBBBBD	Well Depth 397 ft.	Depth Completed 397 ft.	Date Well Completed 05/25/2016
Elevation 1236.9	Elev. Method LiDAR 1m DEM (MNDNR)					Drill Method Dual Rotary	Drill Fluid	
Address Contact120 5TH AV SE BOCA RATON FL 33432						Use irrigation		Status Inactive
						Well Hydrofractured? Yes ☐ No ☐ FromTo		
Stratigraphy Information Geological MaterialFromTo (ft.)ColorHardness TOPSOIL03 SAND310 CLAY & GRAVEL10115 LIMEROCK115397						Casing Type Single casing		Joint Welded
						Drive Shoe? Yes ☒ No ☐ Above/Below		
						Casing DiameterWeightHole Diameter 16 in. To118 ft. 62.58 lbs./ft.16 in. To118 ft. 15 in. To397 ft.		
						Open HoleFrom118 ft.To397 ft.		
						Screen? ☐ TypeMake		
						Static Water Level 15 ft. land surfaceMeasure05/25/2016		
						Pumping Level (below land surface) 210 ft.24 hrs. Pumping at510 g.p.m.		
						Wellhead Completion Pitless adapter manufacturerWELL SEALModel ☒ Casing Protection ☐ 12 in. above grade ☐ At-grade (Environmental Wells and Borings ONLY)		
						Grouting InformationWell Grouted? ☒ Yes ☐ No ☐ Not Specified MaterialAmountFromTo bentonite2 Sacksft.ft.		
						Nearest Known Source of Contamination feetDirectionType Well disinfected upon completion? ☒ Yes ☐ No		
						Pump ☐ Not InstalledDate Installed06/13/2016 Manufacturer's nameBERKELEY Model Number8T55060HP60Volt460 Length of drop pipe273 ftCapacity525 g.p.TypSubmersible		
						Abandoned Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No		
						Variance Was a variance granted from the MDH for this well? ☐ Yes ☒ No		
						Miscellaneous First BedrockDevonian,AquiferCedar Valley- Last StratGalena GroupDepth to Bedrock115 ft Located byMinnesota Department of Health Locate MethodGPS SA Off (averaged) (15 meters) SystemUTM - NAD83, Zone 15, MetersX500846Y4843693 Unique Number VerificationInfo/GPS from dataInput Date08/11/2016		
						Angled Drill Hole		
						Well Contractor Sams Well Drilling, Inc.3059HOFMAN, R. Licensee BusinessLic. or Reg. No.Name of Driller		

Minnesota Unique Well No.

799934

County Mower
Quad Austin East
Quad ID 8B

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 1031

Entry Date 07/13/2016
Update 06/29/2016
Received Date 10/26/2017

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.			
RETTERATH,	103	18	W	10	BBBBBD	irrigation	I	397 ft.	397 ft.	05/25/2016	3059			
Elevation	1236.9	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	Cedar Valley-Galena	Depth to Bedrock	115 ft	Open Hole	118 - 397 ft	Static Water Level	15	ft
Field Located By	Minnesota Department of				Locate Method	GPS SA Off (averaged) (15 meters)				Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -				
Unique No. Verified	Info/GPS from data source				Input Source	Minnesota Department of Health				UTM Easting (X)		500846		
Geological Interpretation	Justin Blum				Input Date	08/11/2016				UTM Northing (Y)		484369		
Agency (Interpretation)										Interpretaion Method		Inferred from driller's log		

Minnesota Well Index

General Information

Unique Well ID:	799934	Well Name:	REITTERATH, STEVE	County:	Mower	Aquifer:	Cedar Valley-Galena
Well Elevation (msl in feet):	1236.9	Drilled Depth (ft):	397	Well Completed (ft):	397	Date Drilled:	05/25/2016
Township:	103	Range:	18	Dir:	W	Section:	10
Subsection:	BBBBBD	Use:	irrigation	Well Status:	Inactive	Depth To Bedrock:	115
Driller:	Sams Well Drilling, Inc.	Entry Date:	07/13/2016	Update Date:	10/26/2017		

Related Resources:

[Go to MN Well Index Map](#) [Well Log Report](#) [Scanned Record\(s\)](#) [Stratigraphy Report](#)

[More Details](#)
 [Stratigraphy](#)
 [Address](#)
 [Chemical Data](#)
 [Construction](#)
 [Pump Test](#)
 [Static Water](#)
 [Comments](#)

[Location Changes](#)
[Overview Map](#)

Test Date	Static level	Pump level	Hour Pumped	Flow Rate
05/25/2016	15	210	24	510
06/01/2015	14	123	2	140

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL
AND BORING NO

799934

WELL OR BORING LOCATION

County Name

Mower

Township Name

Lansing

Township No

103

Range No

18

Section No

10

Fraction

SE 1/4 NW 1/4

GPS LOCATION

Latitude

43

degrees

44

minutes

31

seconds

17

Longitude

92

degrees

59

minutes

5

seconds

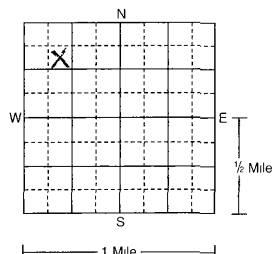
52

House Number, Street Name, City, and ZIP Code of Well Location

Not Assigned Hwy 218

Show exact location of well/boring in section grid with "X"

Sketch map of well/boring location
Showing property lines,
roads, buildings, and direction



Hwy 218

State Hwy 2

Corn field

Well 18

PROPERTY OWNER'S NAME/COMPANY NAME

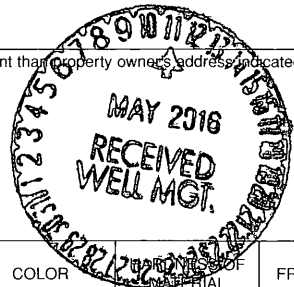
Steve Ketterath

Property owner's mailing address if different than well location address indicated above

120 SE 5th Avenue
Suite 223
Boca Raton FL 33432

WELL OWNER'S NAME/COMPANY NAME

Well/boring owner's mailing address if different than property owner's address indicated above



GEOLOGICAL MATERIALS

COLOR

FROM

TO

clay

tan

0 18

clay @ gravel

18 45

clay

dark gray sticky

45 90

sand, clay, gravel

90 105

sand : gravel

105 120

clay : gravel

brown/tan

120 127

clay, silt, hard

light tan

Soft, loose

127 157

1. sh. rock

light gray

firm

157 320

Use a second sheet, if needed

REMARKS, ELEVATION, SOURCE OF DATA, etc

Not Enough water

WELL/BORING DEPTH (completed)

320

DATE WORK COMPLETED

June 1, 2015

DRILLING METHOD

☐ Cable Tool
☐ Auger
☐ Other

☐ Driven
☒ Rotary

Dual Rotary

DRILLING FLUID

WELL HYDROFRACTURED? ☐ Yes ☒ No

From _____ ft To _____ ft

USE

☐ Domestic
☐ Noncommunity PWS
☐ Community PWS
☐ Elevator

☐ Monitoring
☐ Environ Bore Hole
☒ Irrigation
☐ Dewatering

☐ Heating/Cooling
☐ Industry/Commercial
☐ Remedial

CASING MATERIAL

☒ Steel
☐ Plastic

Drive Shoe? ☒ Yes ☐ No

☐ Threaded

☒ Welded

HOLE DIAM

CASING Diameter

16

in To 157

ft

Weight

62

lbs /ft

Specifications

A53 B

16 in To 157

ft

in To _____

ft

lbs /ft

in To _____

ft

SCREEN

Make _____

Type _____

Slot/Gauze _____

Set between _____

ft and _____

ft

FITTINGS

OPEN HOLE

From 157

ft To 320

Diam _____

Length _____

STATIC WATER LEVEL

14

ft

☒ Below ☐ Above land surface

Measured from Top of casing

Date measured June 1, 2015

PUMPING LEVEL (below land surface)

123

ft after 2

hrs pumping

140

g p m

WELLHEAD COMPLETION

☐ Pitless/adaptor manufacturer _____

Model _____

☐ Casing protection _____

☐ 12 in. above grade

☒ At-grade ☐ Well House ☐ Hand Pump

GROUTING INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material _____

From _____

To _____

ft

☐ Yds ☐ Bags

Material _____

From _____

To _____

ft

☐ Yds ☐ Bags

Material _____

From _____

To _____

ft

☐ Yds ☐ Bags

Driven casing seal

From 0

To 157

ft

4

Bags

NEAREST KNOWN SOURCE OF CONTAMINATION

feet _____

direction _____

type _____

Well disinfected upon completion? ☐ Yes ☐ No

PUMP

☒ Not installed

Date installed _____

Manufacturer's name _____

Model Number _____

HP _____

Volts _____

Length of drop pipe _____

ft

Capacity _____

g p m

Type ☐ Submersible ☐ L S Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

VARIANCE

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

TN# _____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725
The information contained in this report is true to the best of my knowledge

3059

Ray Hofman

June 1, 2015

MINN. DEPT OF HEALTH COPY

799934

WELL OR BORING LOCATION

County Name

Mower

Township Name

Lansing

Township No.

103

Range No.

18

Section No.

10

Fraction

1/4 SE 1/4 NW 1/4 NW

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 103I

MINNESOTA UNIQUE WELL
AND BORING NO.

799934

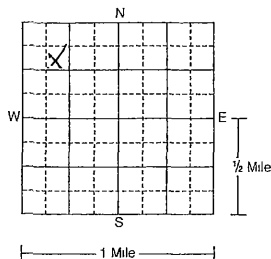
GPS LOCATION — decimal degrees (to four decimal places)

Latitude 43.744474 Longitude -92.989839

House Number, Street Name, City, and ZIP Code of Well Location

Not assigned Hwy 218

Show exact location of well/boring in section grid with "X."

Sketch map of well/boring location
Showing property lines,
roads, buildings, and direction.

Hwy 218

270th St

Well

Cornfield

PROPERTY OWNER'S NAME/COMPANY NAME

Retherath, Steve

Property owner's mailing address if different than well location address indicated above

120 SE 5th Avenue

Suite 223

Boca Raton, FL 33432

WELL OWNER'S NAME/COMPANY NAME

Well/boring owner's mailing address if different than property owner's address indicated above.

WELL/BORING DEPTH (completed)

397

DATE WORK COMPLETED

May 25, 2016

DRILLING METHOD

☐ Cable Tool☐ Auger☒ Other☐ Driven☐ Rotary

Dual Rotary

DRILLING FLUID

None

WELL HYDROFRACTURED? ☐ Yes ☐ No

From _____ ft. To _____ ft.

USE

☐ Domestic☐ Noncommunity PWS☐ Community PWS☐ Elevator☐ Monitoring☐ Environ. Bore Hole☒ Irrigation☐ Dewatering☐ Heating/Cooling☐ Industry/Commercial☐ Remedial

CASING MATERIAL

☒ Steel☐ PlasticDrive Shoe? ☒ Yes ☐ No☐ Threaded☒ Welded

HOLE DIAM.

CASING

Diameter

Weight

Specifications

11 1/2 in. To 11 1/8 ft. 62.5 lbs./ft. A53B

in. To _____ ft. lbs./ft. _____

in. To _____ ft. lbs./ft. _____

SCREEN

Make _____

Type _____

Slot/Gauze _____

Set between _____ ft. and _____ ft.

OPEN HOLE

From _____ ft. To _____ ft.

Diam _____

Length _____

Fittings _____

STATIC WATER LEVEL

15 ft. ☒ Below ☐ Above land surface

Measured from Surface

Date measured 5-25-16

PUMPING LEVEL (below land surface)

210 ft. after 24 hrs. pumping 510 g.p.m.

WELLHEAD COMPLETION

☐ Pitless/adaptor manufacturer _____

Model _____

☒ Casing protection Well Seal☐ 12 in. above grade☐ At-grade☐ Well House☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material Granular From _____ To _____ ft. _____ Yds. ☒ BagsMaterial Bentonite From _____ To _____ ft. _____ Yds. ☐ BagsMaterial _____ From _____ To _____ ft. _____ Yds. ☐ Bags

Driven casing seal From _____ To _____ ft. _____ Bags

NEAREST KNOWN SOURCE OF CONTAMINATION

_____ feet _____ direction _____ type

Well disinfected upon completion? ☒ Yes ☐ No

PUMP

☐ Not installed Date installed June 13, 2016

Manufacturer's name Berkeley

Model Number 8T55040 HP 60 Volts 460

Length of drop pipe 273' ft Capacity 525 g.p.m.

Type ☒ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE

Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN# _____

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725

The information contained in this report is true to the best of my knowledge.

_____ 3059

Licensee Business Name _____ Lic or Reg No. _____

_____ 1147 613-16

Certified Representative Signature _____ Certified Rep No. _____ Date _____

Name of Driller Ray Hoffman

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Topsoil			0	3
Sand			3	10
Clay & gravel			10	115
Limerock			115	397

REMARKS, ELEVATION, SOURCE OF DATA, etc.



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799934