61338 WELL RECORD - Page 1 of 2

PWTS Permit No. 2005-261W

Iowa Department of Natural Resources – Geological Survey
109 Trowbridge Hall, Iowa City, IA 52242-1319 PH (319) 335-1575

PWTS Well No. _____

County Permit No. _____

Site identification

Property Owner City of West Branch, IA Other ID Well #6

Address 304 E. Main Street, PO Box 218

Tenant City of West Branch, IA

Well Depth 1579 ft Date completed 08 / 12 / 05

Location

County Cedar

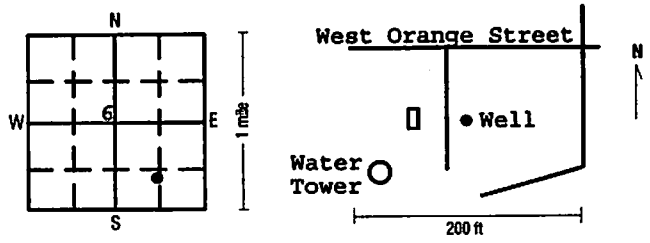
1/64 mi (N) (S) and 1/16 mi (E) (W) of intersection of Orange St and N Maple St

NE 1/4 of the SW 1/4 of the SE 1/4 of Sec 20 TWP 79N RNG 4 (E) (W)

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 ☐ hillside ☐ valley ☐ level surface Elevation (if known) _____

Formation log

From	To	Color	Hardness	Formation description
0	68	Red		Clay
68	103	Gray		Clay
103	443	White		Limestone
443	633	Gray		Shale
633	693			No Return
693	838	Brown		Limestone
838	918	Gray		Limestone
918	943	Gray/black/red		Limestone
943	993	White/gray		Limestone
993	1058	Gray		Lime/shale/sandstone
1058	1068	Brown		Limestone
1068	1178	Gray		Lime w/white sand
1178	1268	Gray		Limestone
1268	1278	White		Limestone
				use additional sheets as needed

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

Well use

☐ Domestic ☐ Livestock ☐ Test well
☐ Heat pump ☒ Municipal ☐ Public supply ☐ Irrigation
☐ Commercial ☐ Monitoring ☐ Other _____

Drill method

☒ rotary ☐ auger ☐ cable other _____

Hole size

25 inch from 0 ft to 116 ft
19 inch from 116 ft to 623 ft

hole size continued
14-3/4 inch from 623 ft to 1120 ft
9-7/8 inch from 1120 ft to 1579 ft

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

Casing

Drive shoe (yes / no) Pitless adapter (yes / no)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
20"	0.375"	0	116'	116'
14"	0.500"	0	623'	623'
10-3/4"	0.365"	623'	1120'	497'

Perforated or slotted casing? (yes / no)

Perforated / slotted from _____ ft to _____ ft

Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes / no) Placement method Pressure

Type	Depth top	Depth bottom	Amount (vol/wt)
Neat Cement	0	116'	56 cyd combined
Neat Cement	0	1120'	

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 _____

Well developed? (yes / no)

Explain Airlift pumping after drilling

(pumped / airlifted / bailed) for 4 hrs at 500+ GPM

Pump installed? (yes / no) Date 09 / 12 / 05

Installer's name Rodney Ray

Type of pump Submersible Depth to intake 512' ft

Pump diameter 7" Rated capacity 500 GPM

Water information

Aquifer: ☐ sand / gravel ☐ limestone ☒ sandstone

Main water-supply zone from 1178 ft to 1579 ft ☐ seepage well

Static water level 301 ft (below / above) GL; ☐ tape ☐ airline ☒ E-line ☐ estimate

Pumping water level 310 ft below GL; ☐ tape ☐ airline ☒ E-line ☐ estimate

At yield of 500 GPM; ☒ orifice ☐ volumetric ☐ estimate for 18 hours

Measurements taken at 9 : 00 (AM / PM) Date 09 / 14 / 05

Water quality test? (yes / no) Date tested 08 / 04 / 05

Tested by Layne-Western

Contractor Layne-Western

Address 5600 Gateway Drive, Suite B, Grimes, IA

Driller Terry Heiliger/Stan Alwardt Certification no. 7320

Send original form to: **Iowa Department of Natural Resources – Geological Survey**

Make photocopies for: **Well Contractor, Customer, and County Health Department**

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PWTS Well No. _____ County Permit No. _____

Site identification

Property Owner City of West Branch Other ID Well #6

Address _____

Tenant _____

Well Depth _____ ft Date completed ____/____/____

Location

County _____

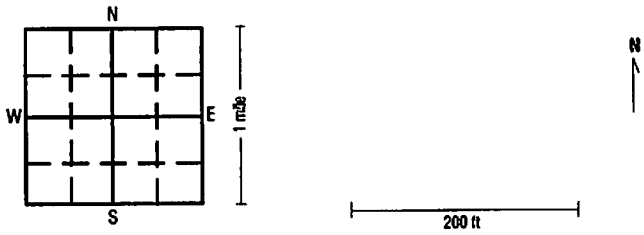
____mi. N/S and ____mi. E/W of intersection of _____ and _____

____1/4 of the____1/4 of the____1/4 of Sec____TWP____RNG____ E/W

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 ☐ hillside ☐ valley ☐ level surface Elevation (if known) _____

Formation log

From	To	Color	Hardness	Formation description
1278	1323	Gray		Limestone w/sand
1323	1503	Gray/tan		Sandstone
1503	1519	Gray/tan		50/50 Sandstone/lime
1519	1579	Gray/tan		Sandstone

use additional sheets as needed

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

Well use

☐ Domestic ☐ Livestock ☐ Test well
☐ Heat pump ☐ Municipal ☐ Public supply ☐ Irrigation
☐ Commercial ☐ 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

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

Casing

Drive shoe (yes / no) Pitless adapter (yes / no)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)

Perforated or slotted casing? (yes / no)

Perforated / slotted from _____ ft to _____ ft
Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes / no) Placement method _____

Type	Depth top	Depth bottom	Amount (vol/wt)

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 _____

Well developed? (yes / no)

Explain _____

(pumped, airlifted, bailed) for _____ hrs at _____ GPM

Pump installed? (yes / no) Date ____/____/____

Installer's name _____

Type of pump _____ Depth to intake _____ ft

Pump diameter _____ Rated capacity _____ GPM

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

Main water-supply zone from _____ ft to _____ ft ☐ seepage well

Static water level _____ ft (below / above) GL; ☐ tape ☐ airline ☐ E-line ☐ estimate

Pumping water level _____ ft below GL; ☐ tape ☐ airline ☐ E-line ☐ estimate

At yield of _____ GPM; ☐ orifice ☐ volumetric ☐ estimate for _____ hours

Measurements taken at ____:____ (AM / PM) Date ____/____/____

Water quality test? (yes / no) Date tested ____/____/____

Tested by _____

Contractor Layne-Western

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