

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

## WELL RECORD

Permit No. \_\_\_\_\_

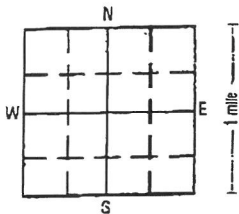
## Site identification

Property Owner City of Leavenworth Well Number \_\_\_\_\_  
Address 101 E Maple St., Leavenworth, IA 51030  
Tenant \_\_\_\_\_  
Well Depth 213 ft Date completed 5/16/06

## Location

County Wadebury

mi. N and mi. E of intersection of \_\_\_\_\_ and \_\_\_\_\_  
NW 1/4 of the NE 1/4 of the SW 1/4 of Sec 32 TWP 89 R1G 45 E  
Show exact location of well in section grid with a dot (•). Sketch map of well location on property.



200 ft

☐ upland ☒ hillside ☐ valley Elevation (if known) \_\_\_\_\_

## Formation log

| From  | To    | Color    | Hardness | Formation description |
|-------|-------|----------|----------|-----------------------|
| 0     | 54    | yellow   | soft     | Clay                  |
| 54    | 65    | gray     | hard     | stiff clay            |
| 65    | 75    |          |          | silt & fine sand      |
| 75    | 80    |          |          | med gravel            |
| 80    | 83    |          |          | med gravel            |
| 83    | 162   | gray     |          | stiff shale           |
| 102   | 102.5 |          | hard     | shale                 |
| 102.5 | 106   |          | hard     | shale                 |
| 106   | 124   |          | med      | oily shale            |
| 124   | 124.5 |          | hard     | limestone             |
| 124.5 | 135   |          |          | siltstone             |
| 135   | 138   |          |          | sandstone             |
| 138   | 145   | white    |          | shale                 |
| 145   | 155   | gray     |          | shale                 |
| 155   | 160   |          | soft     | siltstone             |
| 160   | 214   |          |          | sandstone             |
| 214   | 217   | gray med |          | shale                 |

use additional sheets as needed

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

## Well use

- ☐ Domestic ☒ Municipal ☐ Commercial  
☐ Livestock ☐ Public supply ☐ Monitoring  
☐ Test well ☐ Irrigation ☐ Other \_\_\_\_\_ (explain)

## Drill method

☒ rotary ☐ auger ☐ cable ☐ other

## Hole size

16 inch from 0 ft to 213 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) ☒ Pile adapter (yes/no) ☒

| Size (ID/OD) | Type / Wt | Depth top | Depth bottom | Amount (length) |
|--------------|-----------|-----------|--------------|-----------------|
| 8"           | PVC       | 0         | 163          | 163             |
|              | SDR17     |           |              |                 |

Perforated or slotted casing? (yes/no) ☒

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

Casing grouted? (yes/no) ☒Placement method pumped from bottom

| Type       | Depth Top | Depth bottom | Amount (vol/wt) |
|------------|-----------|--------------|-----------------|
| Peppercorn | 0         | 158          | 160 bags        |
| Bentonite  | 158       | 160          | 2 bags          |

Well screen? (yes/no) ☒

| Diameter | Slot size | Depth Top | Depth Bottom | Length | Material |
|----------|-----------|-----------|--------------|--------|----------|
| 8        | 0.050     | 163       | 213          | 50'    | SS       |
| 0.010    |           |           |              |        |          |

Bottom capped? (yes/no) ☒with SS plate

Seals / Packers (yes/no) kind \_\_\_\_\_ depth \_\_\_\_\_ ft  
Gravel packed (yes/no) from 160 ft to 213 ft  
type miscellaneous amount 2200 lb

Well developed? (yes/no) ☒

Explain \_\_\_\_\_

(pumped, airlifted, bailed) for 12 hrs at 400 GPM.Pump installed? (yes/no) ☒Date 6/16/06Installer's name Vernon VakocType of pump 10 HP Depth to intake 120 ftPump diameter 6" Rated capacity 235 GPM

## Water information

Aquifer: ☐ sand / gravel ☐ limestone ☒ sandstoneMain water-supply zone from 160 ft to 213 ft ☐ seepage wellStatic water level 47 ft (below / above) GL; ☒ tape ☐ airline ☐ E-line ☐ estimatePumping water level 97 ft below GL; ☒ tape ☐ airline ☐ E-line ☐ estimateAt yield of 300 GPM; ☐ orifice ☒ volumetric ☐ estimateMeasurements taken at \_\_\_\_\_ (AM / PM) Date 6/19/06Water quality test? (yes/no) ☒Date tested 1/1Tested by Samples taken by CityContractor Dakota Drilling & Backhoe, Inc.Address 507 142nd St., So. Sioux City, IADriller Vernon Vakoc Certification no. 5561