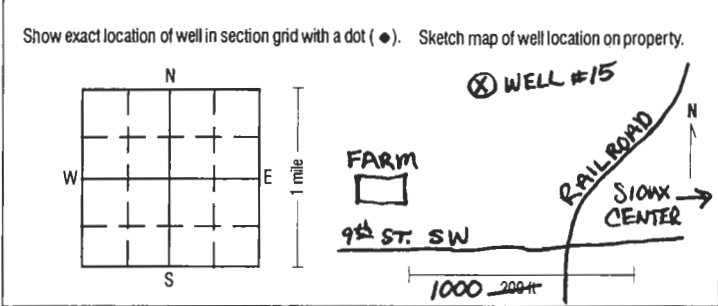


Site identification
 Property Owner CITY OF SIOUX CENTER Other ID WELL #15
 Address 335 1st AVE., NW, SIOUX CENTER, IA 51250
 Tenant CITY OF SIOUX CENTER
 Well Depth 343 ft Date completed 9/22/05

Location County SIOUX
0.2 mi. ^N and 0.13 mi. ^E of intersection of 9th ST. SW and RAILROAD
NE 1/4 of the SE 1/4 of the SW 1/4 of Sec. 5 TWP 95 RNG 45 ^E
 GPS Coordinates (NAD83 datum only) decimal degrees:
 _____ N. Latitude _____ W. Longitude.



upland hillside valley level surface Elevation (if known) 1410

Formation log

| From | To | Color | Hardness | Formation description |
|------|-----|-------|----------|-------------------------|
| 0 | 47 | BROWN | | CLAY |
| 47 | 70 | BROWN | | CLAY W/GRAVEL |
| 70 | 256 | GRAY | | CLAY |
| 256 | 315 | GRAY | | FINE SAND W/HARD LAYERS |
| 315 | 343 | GRAY | | MED. SAND W/HARD LAYERS |

use additional sheets as needed

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

Well use

| | | |
|------------------------------------|---|--------------------------------------|
| <input type="checkbox"/> Domestic | <input type="checkbox"/> Heat pump | <input type="checkbox"/> Commercial |
| <input type="checkbox"/> Livestock | <input checked="" type="checkbox"/> Municipal | <input type="checkbox"/> Monitoring |
| <input type="checkbox"/> Test well | <input type="checkbox"/> Public supply | <input type="checkbox"/> Other _____ |
| | <input type="checkbox"/> Irrigation | |

Drill method rotary auger cable other _____
Hole size
24 inch from 0 ft to 347 ft
 _____ 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) |
|----------------|--------------------|------------|--------------|-----------------|
| <u>12"</u> | <u>STD. 0.375"</u> | <u>5'</u> | <u>318'</u> | <u>313'</u> |
| <u>PITLESS</u> | <u>STD.</u> | <u>+3'</u> | <u>5'</u> | <u>8'</u> |

Perforated or slotted casing? (yes/no) no
 Perforated / slotted from _____ ft to _____ ft
 Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes/no) yes Placement method _____

| Type | Depth top | Depth bottom | Amount (vol/wt) |
|--------------------|------------|--------------|-----------------|
| <u>NEAT CEMENT</u> | <u>10'</u> | <u>240'</u> | <u>22 cyd.</u> |

Well screen (yes/no) yes

| Diameter | Slot size | Depth top | Depth bottom | Length | Material |
|------------|--------------|--------------|--------------|--------------|--------------|
| <u>12"</u> | <u>0.050</u> | <u>318'</u> | <u>343'</u> | <u>25'</u> | <u>SST.</u> |
| <u>0.</u> | <u>_____</u> | <u>_____</u> | <u>_____</u> | <u>_____</u> | <u>_____</u> |

Bottom capped (yes/no) yes with SST PLATE
 Seals / Packers (yes/no) yes kind BENTONITE depth 240-245 ft
 Gravel packed (yes/no) yes from 245 ft to 347 ft
 type NORTHERN 1/8 x 1/16 amount 20 TONS

Well developed? (yes/no) yes
 Explain SURGED, BAILED, PUMPED
 (pumped, airlifted, bailed) for 8 hrs at 300 GPM

Pump installed? (yes/no) yes Date 9/22/05
 Installer's name RODNEY RAY
 Type of pump SUBMERSIBLE Depth to intake 339 ft
 Pump diameter 6" Rated capacity 300 GPM

Water information Aquifer: sand / gravel limestone sandstone
 Main water-supply zone from 318 ft to 343 ft seepage well
 Static water level 280 ft (below/above) GL; tape airline E-line estimate
 Pumping water level 309 ft below GL; tape airline E-line estimate
 At yield of 300 GPM; orifice volumetric estimate for 24 hours
 Measurements taken at _____: _____ (AM / PM) Date 8/23/05

Water quality test? (yes/no) yes Date tested 8/24/05
 Tested by MANGOLD ENVIRONMENTAL TESTING

Contractor LAYNE-WESTERN
 Address 5600 GATEWAY DR., STEB, GRIMES, IA 50111
 Driller DUANE TRASK Certification no. 5509