## **WELL RECORD**

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

PWTS Well No. \_ 5470083

6 1 0 9 8 PWTS Permit No. 2005-499W

Site identification	Drill method ♀ rotary □ auger □ cable other
Property Owner City of Richland Other ID Well #	Hole size hote size continued
Address @North & Walnut Street, Richland	_ 21 inch from 0 ft to 172 8 7/8 from 1372 to 1875
Tenant	- 15 Inch from 172 to 1372 Inch from ft to ft
Well Depth 1,875 ft Date completed 10 / 21 / 05	
Location County Keokuk	Record all depth measurements from ground level (GL). Use (+) for above GL measurements.
V	Casing
mi. N andmi. of intersection of and	- 16" SCH40 Steel 0 172 172
1/4 of the1/4 of the1/4 of	10" DR12 PVC 1 1,372 1,373
GPS Coordinates (NAD83 datum only) decimal degrees:	
N. LatitudeW. Longitude	e
Show exact location of well in section grid with a dot ( ● ). Sketch map of well location on property.	Perforated or slotted casing? (yes no)
N	Perforated / stotted fromft toft
	N Perforated / slotted fromft toft
├ + + + -	Casing grouted? (yes no) Placement method Halliburton
W E	Type   Depth top   Depth bottom   Amount (vol/wt)
<b>├- ┼- ┼- ┤</b>	Cement 0 172 200 bags
S 200 m	Benseal 0 1,300 225 bags
	Cement 1,300 1,372 60 bags Well screen? (yes/no)
X) upland ☐ hilside ☐ valley ☐ level surface Elevation (if known)	Diameter Slot size Depth top Depth bottom Length Material
Formation log  From	0
0 56 Yellow Clay	0
	Bottom capped ( yes no with
56 130 Blue   Clay	Seals / Packers (yes) no ) kind see Remarks depthft
130 155 Shale	Gravel packed ( yes fromft toft
155 370 Mississipian Limes	
370 760 Maple Mill Shale	Well developed? (yes) no)  Explain with air
760 990 Devonian Limestone	(pumped, airlifted) bailed) for 4 hrs at 400 GPM
990 1,110 Maquoketa Shale	
1,110 1,331 Galena Limestone	Pump installed? (yes) no)  to the latter's name
1,331 1,355 St. Peter Sandston	Type of pump submersible Depth to intake 300 ft
1,355 1,834 Prairie DuChien	Pump diameter 6 Rated capacity 150 GPM
1,834 1,860 Sandstone	Water information Aquifer: ☐ sand / gravel ☼timestone ☐ sandstone
	Main water-supply zone from 1,400 ft to 1,670 ft □ seepage well
1,860 1,872 Limestone	Static water level 243 ft ( below/above ) GL;
	Pumping water level 260 ft below GL; ☐ tape 如 airline ☐ E-line ☐ estimate
	At yield of 230 GPM; arifice Strotumetric estimate for hours
use additional sheets as needed	Measurements taken at 2 :00 (AM PM) Date 10 , 20 , 05
Remarks (including depth of lost drilling fluids, materials, or tools)	Water quality test? (yes) no) Date tested / /
Shale Traps at 145, 375, 735, 1020, 1325, and 1372	Tested by Hygienic Lab
Well use	Contractor Gingerich Well & Pump Service, LLC
☐ Domestic ☐ Municipal ☐ Monitoring ☐ Livestock ☐ CPublic supply ☐ Other	Address 1331 Hwy 1, Kalona, IA 52247
☐ Test well ☐ Irrigation	Driller Klint Gingerich Certification no. 2639