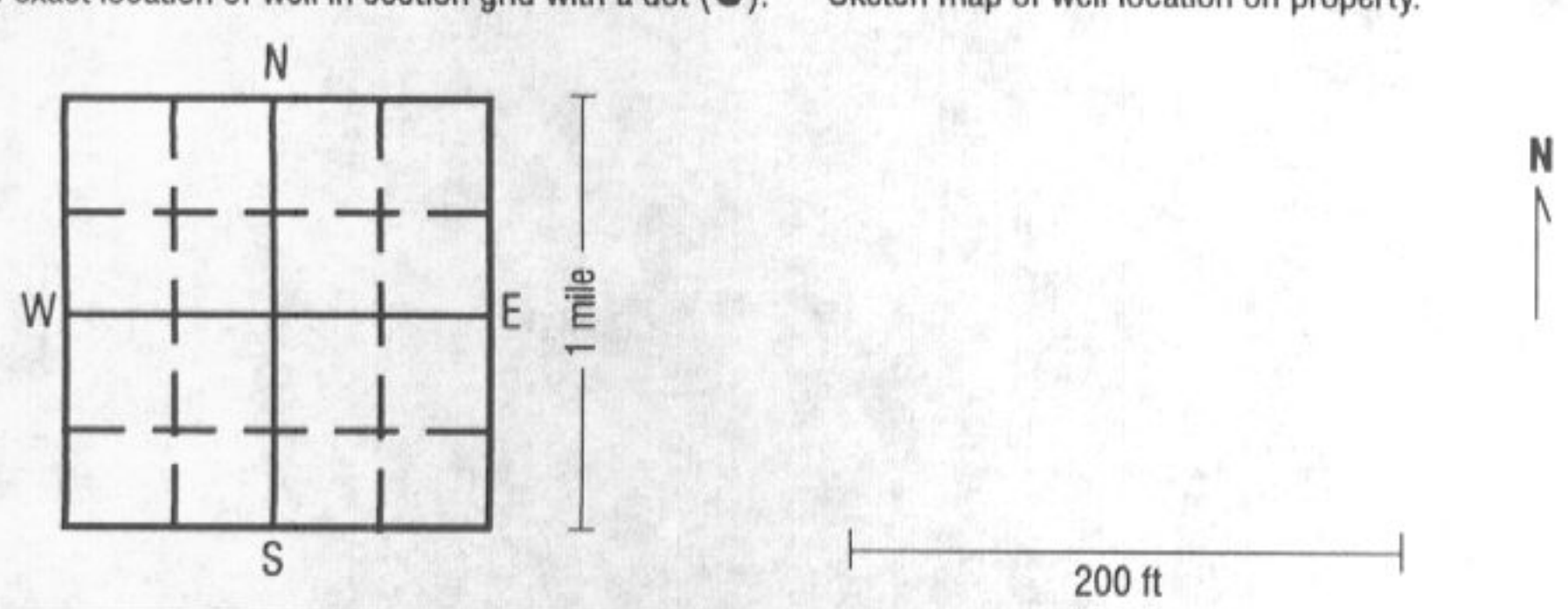


Site identification
 Property Owner Alden, City of Well Number 4
 Address: 408 1/2 Hardin Street
 Tenant _____
 Well Depth 325 ft Date completed 5, 8, 02

Location County Hardin
 _____ mi. N and _____ mi. E of intersection of _____ and _____
 _____ mi. S and _____ mi. W
 _____ 1/4 of the _____ 1/4 of the SW 1/4 of Sec 18 TWP 89 RNG 21 E
 Show exact location of well in section grid with a dot (•). Sketch map of well location on property.

 upland hillside valley Elevation (if known) _____

Formation log

From	To	Color	Hardness	Formation description
0'	43'	Brown		Clay
43'	47'	Brown		Limerock
47'	48 1/2'	Red-Brown		Rock, Clay
48 1/2'	54'	Brown		Limerock
54'	58'	Blue		Shale
58'	78'	Brown		Limerock
78'	84'	Dark Gray		Limerock
84'	100'	Gray		Rock
100'	164'	Brown		Rock
164'	178'	Brown		Rock
178'	190'	Dark Brown		Rock
190'	210'	Brown		Rock
210'	280'	Brown		Rock
280'	295'	Gray		Rock
295'	320'	Brown		Rock
320'	325'	Blue		Shale

use additional sheets as needed

Remarks (including depth of lost drilling fluids, materials, or tools)
1000 Gallons of acid were used to increase production.

Well use

Domestic Municipal Commercial
 Livestock Public supply Monitoring
 Test well Irrigation Other _____
 (explain)

Drill method rotary auger cable other _____
Hole size
7 7/8 inch from 0 ft to 164 ft hole size continued 11 7/8 inch from 166 ft to 325 ft
17 1/2 inch from 0 ft to 166 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 3/4</u>	<u>Steel</u>	<u>2'</u>	<u>166'</u>	<u>168'</u>

Perforated or slotted casing? (yes/no) no

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

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

Type	Depth Top	Depth bottom	Amount (vol/wt)
<u>Neat Cement</u>	<u>0'</u>	<u>166'</u>	<u>120 sacks</u>
<u>Holeplug</u>			<u>5 sacks</u>

Well screen? (yes/no) no

Diameter	Slot size	Depth Top	Depth Bottom	Length	Material
	<u>0. _____</u>				
	<u>0. _____</u>				

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) no Explain 100 GPM @ 320'
 (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 54 ft (below / above) GL; tape airline E-line estimate
 Pumping water level _____ ft below GL; tape airline E-line estimate
 At yield of 140 GPM; orifice volumetric estimate
 Measurements taken at _____: _____ (AM / PM) Date ____/____/____

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

Contractor Shawver Well Company, Inc.
 Address Fredericksburg, IA 50630
 Driller Jim Bunting Certification no. 40121