

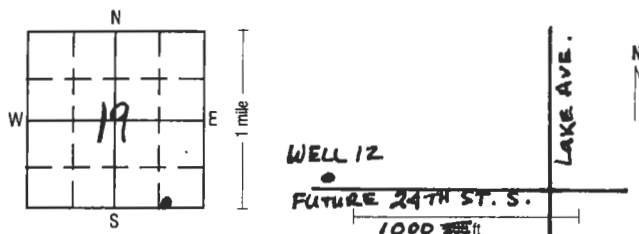
Site identification
Property Owner CITY OF LEMARS Other ID WELL #12
Address 40 CENTRAL AVE. SE, LEMARS, IA 51031
Tenant _____
Well Depth 370 ft Date completed 8 / 31 / 04

Location County PLYMOUTH
50 FT. 1/4 mi. E of intersection of LAKE AVE. and FUTURE 24TH ST. SOUTH
SW 1/4 of the SE 1/4 of the SE 1/4 of Sec. 19 TWP 92 RNG 45 E

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	5'	BRN.		CLAY
5'	15'	GRAY		CLAY
15'	25'	GRAY		MEDIUM-COARSE SAND
25'	30'	GRAY		COARSE SAND w/ GRAVEL
30'	52'	GRAY		CLAY
52'	82'	GRAY		FINE SILTY SAND
82'	179'	GRAY FIRM		CLAY
179'	274'	GRAY		FINE SANDSTONE
274'	278'	BLUE		SHALE
278'	310'	TAN		FINE SANDSTONE
310'	374'	TAN		MED. SANDSTONE
374'	387'	BLUE		SHALE

use additional sheets as needed

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

Well use

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

Drill method ☒ rotary ☐ auger ☐ cable ☐ other _____
Hole size
38 inch from 0 ft to 203 ft
26 inch from 203 ft to 370 ft

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

Casing Drive shoe (yes ☒) Pitless adapter (yes ☒)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
30"	0.321"	0	203'	203'
18"	0.500"	+5'	240'	245'

Perforated or slotted casing? (yes ☒)
Perforated / slotted from _____ ft to _____ ft
Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes ☒) Placement method PRESSURE - OUTER TREMIE - INNER

Type	Depth top	Depth bottom	Amount (vol/wt)
NEAT CEMENT	0	203'	25 cyd.
NEAT CEMENT	0	168'	20 cyd.

Well screen? (yes ☒)

Diameter	Slot size	Depth top	Depth bottom	Length	Material
18"	0.025"	240'	370'	130'	SST.
0					

Bottom capped (yes ☒) with SST PLATE
Seals / Packers (yes ☒) kind BENTONITE depth 168'-173' ft
Gravel packed (yes ☒) from 173 ft to 370 ft
type NORTHERN 0" amount 34 TONS

Well developed? (yes ☒)
Explain ZONE AIRLIFTED, SURGED + BAILED
(pumped) (airlifted) (bailed) for 10 hrs at VARIOUS GPM

Pump installed? (yes ☒) Date 2 / 18 / 05
Installer's name JOE DOOLING / RODNEY RAY
Type of pump VERTICAL TURBINE Depth to intake 124 ft
Pump diameter 13" Rated capacity 1,390 GPM

Water information Aquifer: ☐ sand / gravel ☐ limestone ☒ sandstone
Main water-supply zone from 240 ft to 370 ft ☐ seepage well
Static water level 69 (below / above) GL; ☐ tape ☐ airline ☒ E-line ☐ estimate
Pumping water level 98.5 ft below GL; ☐ tape ☐ airline ☒ E-line ☐ estimate
At yield of 1,324 GPM; ☒ orifice ☐ volumetric ☐ estimate for 2 hours
Measurements taken at _____ (AM ☒ PM) Date 3 / 5 / 05

Water quality test? (yes ☒) Date tested 10 / 4 / 04
Tested by IOWA HYGIENIC LAB

Contractor LAYNE - WESTERN
Address 5600 GATEWAY DR., STE B, GRIMES, IA 50111
Driller BEN BAILY Certification no. 1310
DUANE TRASK 5809