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WELL RECORD

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

PWTS Well No. W2007-483

PWTS Permit No. 2008-374W

County Permit No. _____

Site identification

Property Owner Poweshiek Water Assoc. Other ID VW-01

Address 125 Industrial Dr., Brooklyn, IA 52211

Tenant Poweshiek Water Association

Well Depth 30 ft Date completed 10 / 03 / 08

Location

County Iowa

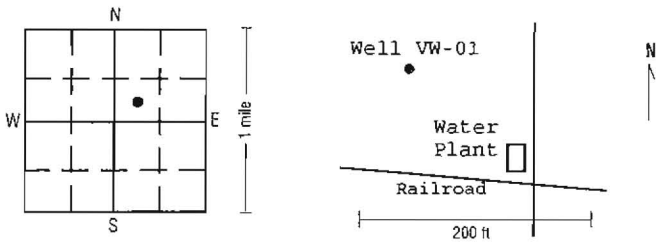
1/4 mi. (N) (S) and 1/4 mi. (E) (W) of intersection of 220th Trail and Iowa Interstate Railroad

SE 1/4 of the SW 1/4 of the NE 1/4 of Sec 35 TWP 81 RNG 10 (E) (W)

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	6	Brown		Clay
6	25	Tan/Gray		Fine sand
25	30	Gray		Fine-medium sand
30	32	Gray		Clay

use additional sheets as needed

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

Well use

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

Drill method

☐ rotary ☐ auger ☐ cable other Reverse

Hole size

20 inch from 0 ft to 32 ft

_____ inch from _____ ft to _____ 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) Pitless adapter (yes) (no)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
10"	0.365 Steel	4'	25'	21'

Perforated or slotted casing? (yes) (no)

Perforated / slotted from _____ ft to _____ ft

Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes) (no) Placement method Tremie

Type	Depth top	Depth bottom	Amount (vol/wt)
Neat Cement	3'	18'	1 cyd

Well screen? (yes) (no)

Diameter	Slot size	Depth top	Depth bottom	Length	Material
10"	0.055	25'	30'	5'	SST
	0.___				

Bottom capped (yes) (no) with SST Plate Attached

Seals / Packers (yes) (no) kind Bentonite depth 18-20 ft

Gravel packed (yes) (no) from 20 ft to 32 ft

type Northern #2 amount 2 ton

Well developed? (yes) (no)

Explain Surge block, bailer, surge pumping

(pumped), airlifted, (bailed) for 4 hrs at 200 GPM

Pump installed? (yes) (no) Date 10 / 03 / 08

Installer's name Dean Carlisle

Type of pump Submersible Depth to intake 25 ft

Pump diameter 6" Rated capacity 150 GPM

Water information

Aquifer: ☒ sand / gravel ☐ limestone ☐ sandstone

Main water-supply zone from 15 ft to 30 ft ☐ seepage well

Static water level 12.5 ft (below) above) GL, ☐ tape ☐ airline ☒ E-line ☐ estimate

Pumping water level 22 ft below GL; ☐ tape ☐ airline ☒ E-line ☐ estimate

At yield of 137 GPM; ☒ orifice ☐ volumetric ☐ estimate for 48 hours

Measurements taken at 1 : 15 (AM) (PM) Date 08 / 15 / 08

Water quality test? (yes) (no) Date tested ___ / ___ / ___

Tested by _____

Contractor Layne-Western

Address 5600 Gateway Drive, Suite B, Grimes, IA

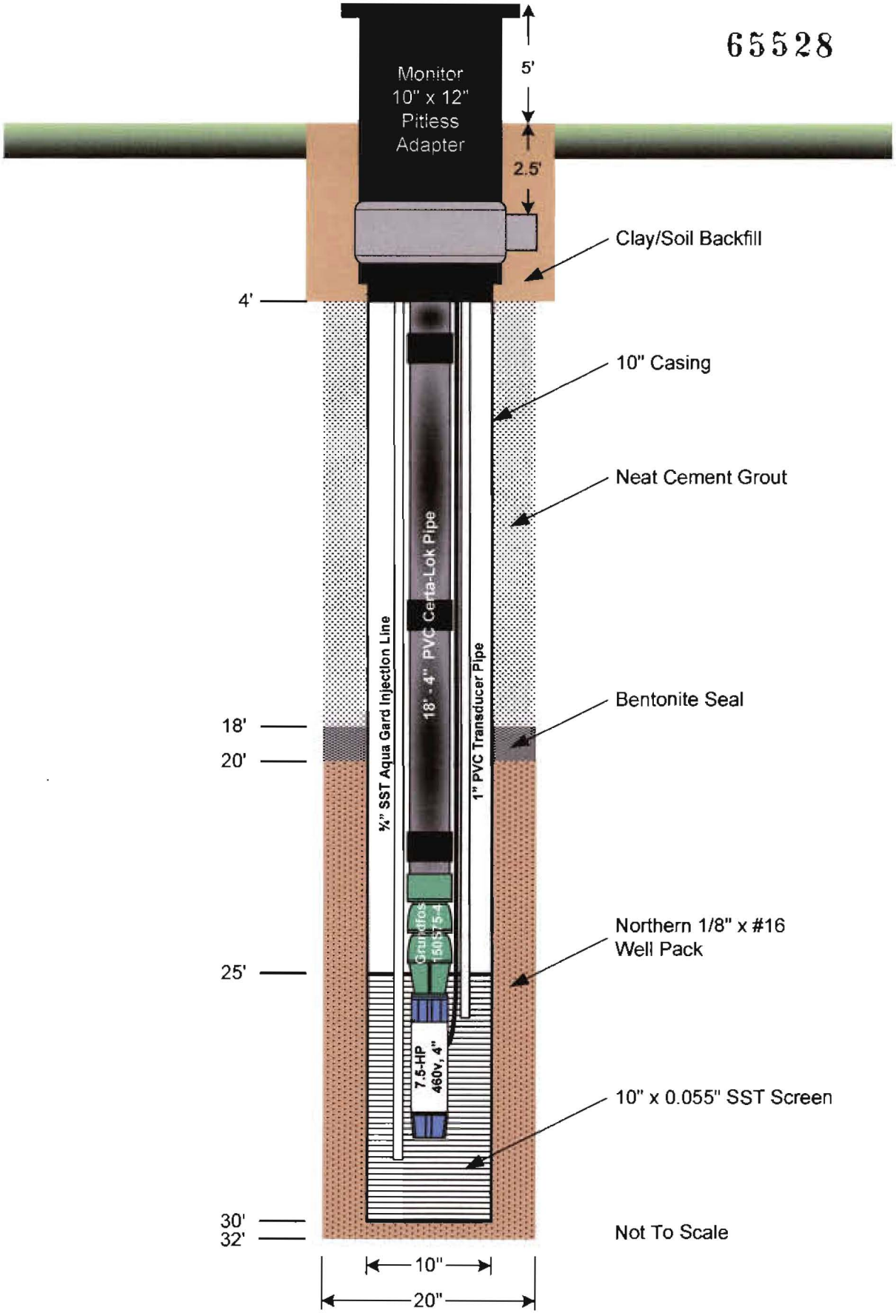
Driller Terry Heiliger Certification no. 7320

Send original form to: **Iowa Department of Natural Resources – Geological Survey**

Make photocopies for: **Well Contractor, Customer, and County Health Department**

Poweshiek Water Association – Iowa County Well Field
Well #VW-01 Construction Detail
Layne-Western

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STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

RECEIVED
JUN 30 2008
BARTLETT & WEST

June 26, 2008

Poweshiek Water Association
Attn: Chad Coburn
PO Box 504
Brooklyn, IA 52211

Subject: Permit No. 2008-374W

Dear Mr. Coburn:

As a reminder regarding the well construction permit no. 2008-374W, please have the well contractor include the PWSID No.: 4868701 and corresponding facility number for each well constructed as part of the identification information when submitting the required water quality test sample bottles to the certified lab for analysis. The facility number for each locally classified well is as follows:

Local Classification	Facility No.
WTP VW-01	WL01
WTP AW-01	WL02
WTP AW-02	WL03

If you have any questions, please contact me at (515) 725-0222 or e-mail at bob.campbell@dnr.iowa.gov.

Sincerely,

Robert D Campbell
Water Supply Section

cc: Bartlett & West Engineers, 6919 Vista Drive, West Des Moines, IA 50266
Field Office No. 6 (Washington)
File: PWSID No. 4868701

STATE OF IOWA
DEPARTMENT OF NATURAL RESOURCES
Water Supply Engineering
401 S.W. 7th St., Suite M
DES MOINES, IOWA 50309-4611

65528

WATER SUPPLY CONSTRUCTION PERMIT

Poweshiek Water Association
125 Industrial Dr, PO Box 504
Brooklyn, IA 52211

Permit No.: 2008-374W
Project No.: W2007-483
PWSID No.: 4868701

In accordance with the provisions of Sections 455B-173.9 and 455B-174.4, Code of Iowa, and 567 IAC 43.3 (455B) of the Iowa Administrative Code, the Director of the Department of Natural Resources does hereby issue a permit for the construction of:

two public water supply angled wells locally known as WTP AW-01 and WTP AW-02, each with 24-inch outer and 12-inch inner steel casings approximately 128 feet in length, WTP AW-01 with a 300 gpm pump capacity and WTP AW-02 with a 475 gpm pump capacity; one public water supply vertical well locally known as WTP VW-01, with a 10-inch steel casing approximately 20 feet in length, with a 100 gpm pump capacity; including Addendum No. 1, Addendum No. 2 and Change Order No. 1; all (including appurtenances and connecting piping) as in accordance with the plans and specifications for the Iowa County Well Field project, for the Poweshiek Water Association.

Note: All permanent well casings must be surrounded by a minimum of 1.5-inches of grout, and must be fully grouted.

NOTICE: The issuance of this construction permit is based SOLELY on the engineer's certification that all aspects of design included in the project meet the requirements of all applicable state and federal laws and regulations. An advisory review of the plans and specifications may be made at a later date.

The construction of the project shall be initiated within one year of issuance of this permit or this permit is no longer valid. Within thirty days after completion of construction, the permit holder shall submit a certification by a registered professional engineer that the project was completed in accordance with the approved project documents.

Pursuant to Section 455B.174.4, Code of Iowa, you have the right to appeal any condition of this permit by filing with the Director of the Department of Natural Resources a notice of appeal and request for administrative hearing within thirty days of receipt of this permit.

If you have any questions, please contact Bob Campbell at (515) 725-0222 or via e-mail at bob.campbell@dnr.iowa.gov.

For the Department of Natural Resources

Richard A. Leopold, Director

By: Roy D May PE
ENVIRONMENTAL SERVICES DIVISION

Date: June 26, 2008

cc: Field Office No. 6 (Washington)
File: WS 4868701
Bartlett & West Engineers, 6919 Vista Drive, West Des Moines, IA 50266