

SCHEDULE - 5a
WELL
CONSTRUCTIONIOWA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER SUPPLY
CONSTRUCTION PERMIT APPLICATION

NOTICE

THE FEE FOR EXAMINATION OF THIS SCHEDULE IS \$95.00

DATE PREPARED

PROJECT IDENTITY

PROJECT NO.

4/27/87

1987 Water System Improvements

DATE REVISED

Well # 83

PERMIT NO.

Rock Valley, Iowa

1. Well Number 83

2. Casing Pipe and Well Screen Materials:

Casing Material (Designate Alternates)	ASTM or API Std.	Weight/ft. (lbs.)	Thickness (Inches)	Outside Diameter (Inches)	Length (feet)
Steel	A-53	49.56	6.375	12	12

Screen Material (Designate Alternates)	Type of Screen	Size Screen Opening	Total Screen Open Area (sq. Inches)	Outside Diameter (Inches)	Length (feet)
Stainless Steel	Johnson	#40	679	12.75	7

3. For the following, reference the applied DEQ, AWWA, GLUMRB or ASTM design standard source and number, and the page of the plan or specifications where the description can be found.

Construction Details	DEQ	AWWA	GLUMRB	ASTM	Standard Number	Page Number
Protection of well during construction	X				3.2.5.3	4-4
Casing welds	X				3.2.5.3	4-2
Casing Centralizers	X					4-2
Gravel Pack	X				3.2.6.2	4-4
Radial Collectors						
Packers						
Grouting	X				3.2.5.7	4-3
Plumbness and Alignment Test (wells > 100 ft.)	X				3.2.4.2	4-5
Well Development	X				3.2.5.9	4-6
Yield Drawdown Tests	X				3.2.4.7	4-7
Observation Wells	X				3.2.4.7	
Water Quality Analysis	X				3.2.2	4-8
Disinfection	X					4-7
Abandonment of Well	X				3.2.5.11	4-6

4. Method of drilling, if specified: Rotary5. Geological samples and well construction log specified to be forwarded to the Iowa Geological Survey?
Yes ☒ No ☐ (spec. page no. 4-5)6. Well construction log, yield and drawdown test results, and water quality sample results are specified to be forwarded to the Department: Yes ☒ No ☐ (spec. page no. 4-5)

SCHEDULE-5b
WELL
APPURTENANCES
IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER SUPPLY
CONSTRUCTION PERMIT APPLICATION

NOTICE
 THE FEE FOR EXAMINATION OF THIS SCHEDULE IS \$30.00

DATE PREPARED <u>4/27/87</u>	PROJECT IDENTITY 1987 Water System Improvements Well # <u>K3</u> Rock Valley, Iowa	PROJECT NO. [REDACTED]
DATE REVISED		PERMIT NO. [REDACTED]

- Well Number K3
- Pump and Motor Information:
 - Pump Type: submersible
 - Pump Capacity: 250 gpm at 225 TDH(ft.)
 - Size of Pump Discharge Pipe: 4 inches
 - Motor Horsepower: 20 HP
- Method of regulating well pump starting and stopping: Pressure sensor at the elevated tower with direct wire to wells will start & stop pumps
 (spec. page no. use existing)
- For automatic control systems, what is the time delay period? 60 seconds N/A ☐
- What type of antibackspin protection is provided? non-reversing ratchet
 (spec. page no. 5-1)
- Has a low water level cutoff switch or pressure switch been provided and equipped with automatic restart to prevent drawdown of water in the well below the well screen?
 Yes ☐ No ☒
- Method of surface drainage control away from well Berm built up above flood plain at well field
- 100-year flood elevation 1,230
 Original ground elevation at the well site 1,240
 Elevation of top of well casing 1,244.5
 Elevation of top of earthen well berm at the well 1242.0
 Elevation of floor slab 1,242.5
- Radius of top of earthen berm 10' Slope of berm 3:1
- Method of berm erosion control seeded (spec. page no. 2-4)
- For the following, describe the type of equipment installed, reference the applied DEQ, AWWA, GLUMRB or ASTM design standard source and number, and list the page of the plans or specifications where the description can be found.

Well Pump, Discharge Piping and Appurtenances	Description	DEQ	AWWA	GLUMRB	ASTM	Standard Number	Page Number
Pump	XXXXXXXXXXXXXXXXXXXX						5-1
Discharge Pipe	XXXXXXXXXXXXXXXXXXXX						5-2
Pitless Well Unit							5-2
Casing Vent							5-2
Water Level Measurement							5-3
Disinfection	XXXXXXXXXXXXXXXXXXXX						5-3

- Type of pump lubrication water (spec. page no. 5-1)
- List all appurtenances provided on each well discharge line in sequence from the well:
Motor pump, check valve, meter, check valve, hydrant, gate valve; use existing

SCHEDULE-5c
WELL
PROFILE
IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER SUPPLY
CONSTRUCTION PERMIT APPLICATION

NOTICE
THERE IS NO FEE FOR EXAMINATION OF THIS SCHEDULE

DATE PREPARED

4/27/87

DATE REVISED

PROJECT IDENTITY

1987 Water System Improvements

Well #83

Rock Valley, Iowa

PROJECT NO.

PERMIT NO.

Well Number:

83

Geological Data**Casing Data****Well Data**

System	Formation	Material and distance from surface in ft.	Position, kind and extent of casing liners, shoes, etc	Scale: Horiz. Vert.	Position of seals, screens, static level
		0		0 42'	
	BLACK SANDY SOIL		44' 12" WELL CASING		
		55'			
	BROWN CLAY	7'			
	GRAVEL CLAY TRACE	10'			
	GRAVEL COARSE SANDY BOULDERS				
		20'			
	COARSE SAND BOULDERS	25'			
	GRAVEL COARSE SAND BOULDERS & TRACE OF CLAY				
		39.5'			
	BROWN CLAY	40'			
	GRAVEL BOULDERS				
		50'			
	BLUE CLAY				
		52'			

WATER SUPPLY
PROGRAM :

CONSTRUCTION PERMIT APPLICATION

SCHEDULE 3b, Water Quality Data

NOTICE

There is no fee for examination of this schedule

WAWM USE

DATE PREPARED

4/27/87

PROJECT IDENTITY

1987 Water System Improvements

PROJECT NO.

DATE REVISED

Well #~~3~~ 3

PERMIT NO.

Rock Valley, Iowa

1. Source Identification, Location and Capacities: Well #3 which will be abandoned & Well #6 will be constructed 100' away and into same Aquifer.

Well No.	Existing	Proposed	Primary	Secondary	Source Location (Section-Township-Range)	Aquifer	Well Depth (feet)	Current Average Yield (gpd)	Design Year Average Yield (gpd)	Rated Capacity (gpm)
#3	X					Sand & Gravel	49	100	250	250
#6		X		X		Sand & Gravel	49		250	250
TOTAL										

2. Water Quality Data: See attached University Hygienic Lab results of Well #3

Parameter	Units	Proposed Raw Water Source	Existing Raw Water		Treated Water	
			Minimum	Maximum	Present	Design
Primary Drinking Water Standards	Arsenic					
	Boron					
	Cadmium					
	Chromium					
	Fluoride					
	Lead					
	Mercury					
	Nitrate (as N)					
	Selenium					
	Silver					
	Gross Alpha					
	Strontium 90					
	Turbidity					
	Coliform Bacteria					
Other Parameters	Sodium					
	Calcium					
	Magnesium					
	Manganese					
	Iron					
	Sulfate					
	pH					
	Filterable Residue					
	Hardness as CO ₃					
	Alkalinity as CO ₃					
	Corrosivity		XXXXXXXX	XXXXXXXX		

3. What is the source of the above listed water quality data, the number of water samples evaluated and the time frame over which samples were collected? Well #3



Well And Pump Service

Municipal Industrial
Irrigation Residential

411 E. Main Street
P.O. Box 309
Fredericksburg, IA 50630-0309
563-237-5361
FAX 563-237-6517

PUMP INSTALLATION RECORD

Customer: Rock Valley
Date: 9/23/04
Contact: Myron Van Ginkel
Location: well house west of 15th Ave.
north end of town

WELL INFORMATION:

Well: 3 Dia: 12" Depth 53'
Static Water Level: 18'
Screened Well: Yes No
If yes from to
Screen Material:
Liners: Yes No UNK
If yes from to

DISCHARGE:

Type: 6" Tee
Above or Below Ground
Flange Size: 6"
If Pitless, then
Casing Size:
O-ring Size:
Model: N/A

AIRLINE AND WATER METER:

Air Line Length: 42'
Material: Toro
Does it Work: Yes No
Water Meter: Yes No
Mfg: Sensus Size: 4"
Does It Work Yes No

SUBMERSIBLE INSTALLATION ONLY:

Dia. Of Motor: 6"
No. of Check Valves: 1
Rated Voltage: 460
RPM: 3450
HP: 40
Date Code: 04 H

Cable Size: 8/3 Jacketed: yes
Size: 6" Type: Flowmatic
Rated Amperage: 54.9 max 61.6
Mfg.: Franklin Electric
Serial #: 336334930
Amps:

Megger Check Results:
Cable Leads -- Windings: OK OK OK
Cable Leads -- Ground: OK OK OK
Motor Leads -- Windings: OK OK OK
Motor Leads -- Ground: OK OK OK

Pump End & Column Pipe:
Mfg: Goulds
of Stages: 4
Serial # 488397
Discharge Size: 6"

Model: 7C1C040 Dia: 7"
Date Code: 904
Material: CI

Column Pipe Size: 6" Length: 20' No of: 2
Total Pump Setting: 41' Rated Capacity: 300 GPM @ 368' TDH
350 @ 336'

LOG

Vant Hal and Sons Well Drilling Co.

Rock Valley, Iowa
Phone (712) 476-5647Drilled for City of Rock Valley Date Aug. 7-89

Tenant _____

Address Rock ValleyLocation Well No. 3Drilled by Beryl Vant HalCased with Steel Casing Total Depth 50 ft.Finished in Gravel WELFS 12' ft.Capacity tested to 1000 Gals. per minScreen used ✓ Slot size 80 length 10' Diameter 12"

Other information:

FORMATIONS PASSED THROUGH

No. of ft.	Kind of Formation
<u>0-4</u>	<u>Black Dirt</u>
<u>4-20</u>	<u>Sand</u>
<u>20-40</u>	<u>Gravel</u>
<u>40-50</u>	<u>Gravel</u>
<u>50-52</u>	<u>Blue clay</u>

Signed Beryl Vant Hal
Driller