

# City of Ridgeway, IA

## Well # 2?

**10" Diameter well**

**Modifications started 4/16/09, completed 4/20/09---Original construction, late 1970's**

### **Log of Well (based on elevation & estimated depths)**

0'	To	20' ±	Topsoil & surficial clays
20'	To	80' ±	Brainerd Shale
80'	To	140' ±	Ft. Atkinson Limestone
140'	To	160' ±	Clermont Shale
160'	To	210' ±	Elgin Formation
210'	To	435' ±	Galena Limestone
435'	To	535' ±	Decorah/Plateville formation & Glenwood Shale
535'	To	598'	St. Peter Sandstone

### **Construction Record (as observed & recorded from televising of the well)**

The well is cased to 219' below ground with 10.75" OD X .500 wall (approx) steel casing. It is believed that a 15" hole was drilled to 219' to facilitate installation of the casing and grout. The original specifications required that the casing be grouted with neat cement grout and it is anticipated that it was. An approximate 9.5" hole was drilled from the base of the casing (219') to 598'.

In 2008 the well had dropped off dramatically in production. It was determined that the well had filled in and was blocked off at an approximate depth of 468'. The well was subsequently televised to confirm the blockage. In May of 2009 the City of Ridgeway authorized the removal of the blockage and the subsequent installation of a perforated liner.

Work commenced on the well cleaning on May 26<sup>th</sup>, 2009. The blockage was first attempted to be removed with air, however the blockage was determined to be shale and the shale continued to "slough" very badly and the method of cleaning was switched from air to fluid. The well was subsequently cleaned to the bottom and a few extra feet of hole were drilled until firm bedrock was encountered (from 596' to 598').

161' of 8" stainless steel liner (schedule 40) was installed in the well. The top of the liner is at 436'. The liner was perforated from 538' to 596'. The well was subsequently airlifted and developed for a period of 5 hours. The static water level upon completion was at 282' (water was still rising when we completed project). A new Monitor pitless unit was installed and the existing well pump was re-installed. The well was test pumped at a rate of gallons per minute for a period of 6.5 hours. The well drew down to 319' pumping at the rate of 85 GPM.



Well And Pump Service  
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Irrigation      Residential

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## WELL TEST DATA SHEET

CLIENT: Ridgeway, IA

WELL#: 2

DATE: 6-8-09

TESTED BY: Corey

PUMP MODEL: 150-S-150-8 STG.

AIRLINE LENGTH: 390'

DIAMETER: 10"

ORIFICE SIZE: 4 X 2 ½

DEPTH OF WELL: 592'

MOTOR: 15 HP, 230 V HITACHI

STATIC WATER LEVEL: 238'

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GENERATOR USED:    YES    NO

GNI-                  GN2-

BEGIN HOURS:

END HOURS:

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**CONSTANT RATE**

**STEP-RATE TEST**

**PRE-TREATMENT**

**POST -TREATMENT**

MEASUREMENT TAKEN FROM THE TOP OF THE WELL CASING WHICH IS 2' FEET FROM  
EXISTING GROUND/FLOOR LEVEL

[illegible]