

IOWA STATE DEPARTMENT OF HEALTH
DIVISION OF PUBLIC HEALTH ENGINEERING AND INDUSTRIAL HYGIENE

GROUND WATER

1962 (see) ...

Town Otho County Webster Date January 23 19 57

WELL NO. 1 Active Yes Standby None Abandoned _____ Replaced by No. _____

LOCATION: Street West Street Sec. 19 T. 88 N.R. 28 East: West

Lot _____ Block _____ Township _____

OWNERSHIP Municipal Date Installed Started October 1955
Completed Jan. 1956

CONTRACTOR Layne Western Ken Smith, driller address _____ Area, Iowa

DATE RECONDITIONED None 19 _____ Contractor _____ Address _____

CONSTRUCTION EMPLOYED: Temporary 20" casing to 20' depth. 8" permanent casing from point 2' above ground to the 214' level which is 14' into limestone. 6" slotted liner from 210 to 342, cement grout placed in this liner and was forced out through slots to fill the area between outside of liner and the 8" drilled hole. After 72 hrs. setting time grout and bridge were drilled out of 6" liner.

CURB ELEVATION _____ REFERENCE Top of concrete pedestal

TYPE OF CONSTRUCTION Deep well drilled Depth 616 ft. Diameter 8 in.

CASING: Material Flock pipe Condition New

SCREEN: Material None Length _____ ft. Diameter _____ in. Slot Opening _____ in.

WELL SEALED Yes How 2' sq. conc. ped. 18" high around top of casing Approved Yes

WELL VENTED Yes How 3/4" turned down screened casing vent Approved Yes

TYPE OF PUMP Ver. turbine Make Layne & Bowler Inc. Capacity 50 GPM Lubricated Water

DEPTH TO Bottom of Bowls 200 ft. Tail Pipe None 10 ? ft.

PUMP CONTROL: Manual _____ Automatic Yes Semi-Automatic _____

Asq 1462-90
STATIC LEVEL 74 ft. Pumping Level _____ ft. Drawdown _____ ft.

OPTIMUM SPECIFIC YIELD 50 GPM Drawdown _____ ft. Time _____ hrs.

RATE OF DRAWDOWN _____ Rate of Recovery _____

TEMPERATURE OF WATER _____ °F Where Measured _____ Temp. of Atmosphere _____ °F

DRAWDOWN GAUGE INSTALLED Yes

TOPOGRAPHICAL POSITION OF WELL Flat

WELL SITE INVESTIGATED Yes Approved Yes Why not -see report dated Sept. 26, 1955

WELL CONSTRUCTION REVIEWED Yes Approved Yes Why not _____

PIT CONSTRUCTION: Purpose None Size and Description _____

CONDITION: _____ Drainage Facilities _____

PUMP INSTALLATION: Approved Yes Why Not _____

CUTTINGS FROM WELL PRESERVED: Partly Where Layne Western Co. Trust

DEPTH TO BED ROCK 200 Depth to Water-bearing Stratum 342 to 616

SOURCE OF WATER: Principal Formation Limestone Other _____

Planning to increase IR cap to 100 gal per min (Feb 1960)
LD will submit plan to well & Trust

DATE RECONDITIONED: None 19 Contractor: Address:

CONSTRUCTION EMPLOYED: Temporary 20" casing to 20' depth. 8" permanent casing from point 2' above ground to the 214' level which is 14' into limestone. 6" slotted liner from 210 to 342, cement grout placed in this liner and was forced out through slots to fill the area between outside of liner and the 8" drilled hole. After 72 hrs. setting time grout and bridge were drilled out of 6" liner.

CURB ELEVATION: REFERENCE: Top of concrete pedestal

TYPE OF CONSTRUCTION: Deep well drilled Depth: 616 ft. Diameter: 8 in.

CASING: Material: Block pipe Condition: New

SCREEN: Material: None Length: ft. Diameter: in. Slot Opening: casing

WELL SEALED: Yes How: 2' sq. conc. ped. 18" high around top of casing Approved: Yes

WELL VENTED: Yes How: 3/4" turned down screened casing vent Approved: Yes

TYPE OF PUMP: Ver. turbine Make: Layne & Bowler Inc. Capacity: 50 GPM Lubricated: Water

DEPTH TO SPENDER: Bottom of Bowls 200 ft. Tail Pipe: None 10' ? ft.

PUMP CONTROL: Manual: Automatic: Yes Semi-Automatic

STATIC LEVEL: 74 ft. Pumping Level: ft. Drawdown: ft.

OPTIMUM SPECIFIC YIELD: 50 GPM Drawdown: ft. Time: hrs.

RATE OF DRAWDOWN: Rate of Recovery:

TEMPERATURE OF WATER: °F Where Measured: Temp. of Atmosphere: °F

DRAWDOWN GAUGE INSTALLED: Yes

TOPOGRAPHICAL POSITION OF WELL: Flat

WELL SITE INVESTIGATED: Yes Approved: Yes -see report dated Sept. 26, 1955 Why not:

WELL CONSTRUCTION REVIEWED: Yes Approved: Yes Why not:

PIT CONSTRUCTION: Purpose: None Size and Description:

CONDITION: Drainage Facilities:

PUMP INSTALLATION: Approved: Yes Why Not:

CUTTINGS FROM WELL PRESERVED: Partly Where: Layne Western Co. Turbines Dept.

DEPTH TO BED ROCK: 200 Depth to Water-bearing Stratum: 342 to 616

SOURCE OF WATER: Principal Formation: Limestone Other:

June 7, 1956 - Mineral Analysis

Total Hardness: 468 27.4 ppm. Total Iron: .83 ppm. Sulfates: 143 ppm. Fluorine: 2.2 ppm. Manganese: <.05 ppm. pH: 7.0 CO2: ppm.

REMARKS: The upper 30' of the permanent casing was grouted to the 30' level. Alternate layers of shale & limestone between the 230 & 260' level caused considerable caving and required the 6" slotted cemented in liner which extends from 210 to the 342' level. When completed S.L. was 86', well acidized and S.L. rose to 74'.

Well disinfected May 10, 1956. - V.T. installed in March 1956

IR. ... shall ...

6 ft. sq. frame insulated pump house - conc floor.

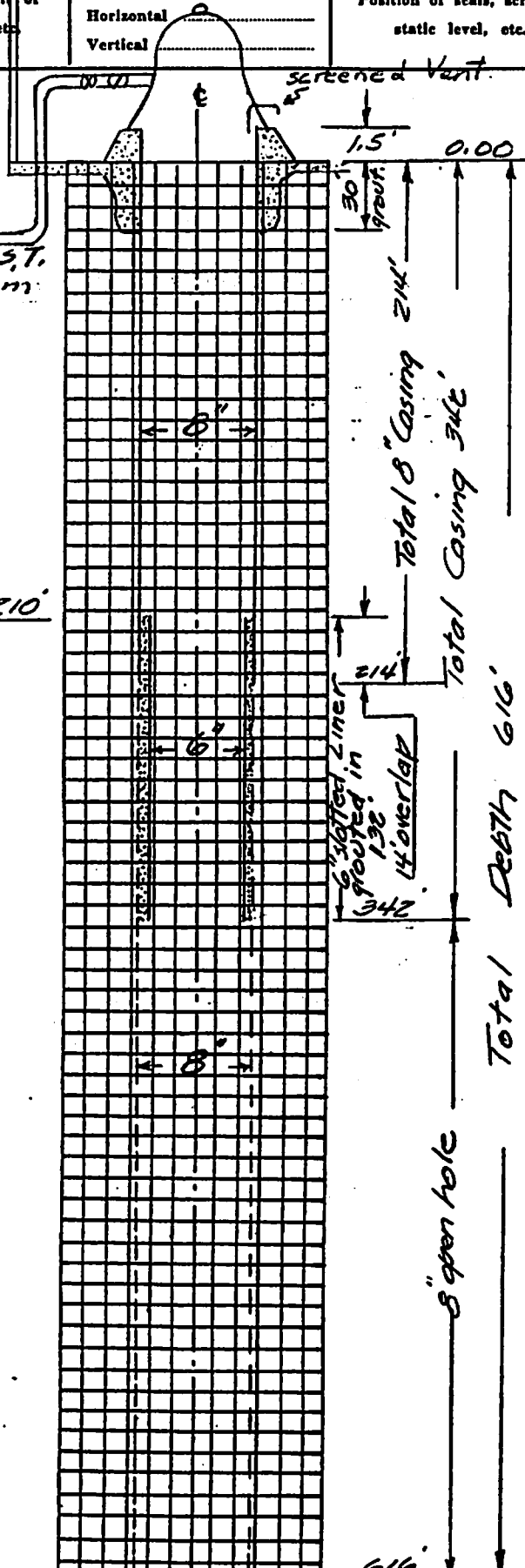
increased size of 12" ... 2 20' tanks well & placed in operation in 1961

GEOLOGICAL DATA			CASING DATA		WELL DATA	
Formation	Material and distance from surface in ft.	Series	Position, kind and extent of casing, liners, shoes, etc.	Seals: Horizontal Vertical	Position of seals, screens, static level, etc.	

From	to	Formation
0	45	Firm clay
45	210	?
210	230	Limestone
230	260	Light layer of shale between limestone
260	616	Limestone

Top of 210' Limestone

To E.S.T. System



screened Vent.
1.5'
0.00
30' depth.
Total 8" casing 214'
Total casing 342'
Total Depth 616'
8" open hole
616'