

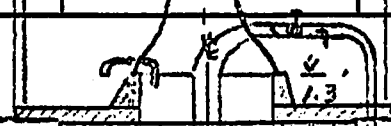
GEOLOGICAL DATA			CASING DATA	WELL DATA	
Formation	Material and distance from surface in ft.	Series	Position, kind and extent of casing, liners, shoes, etc.	Scale: Horizontal Vertical	Position of seals, screens, static level, etc. <i>insulated.</i>

WELL LOG -- AT TIME OF DRILLING

0 to 33 ft. clay

33 to 50 ft. relatively loose rock dense

50 to 75 ft. solid rock -- presumably of the Gilmore City formation



ground
Elev = 11257

To distr. system.

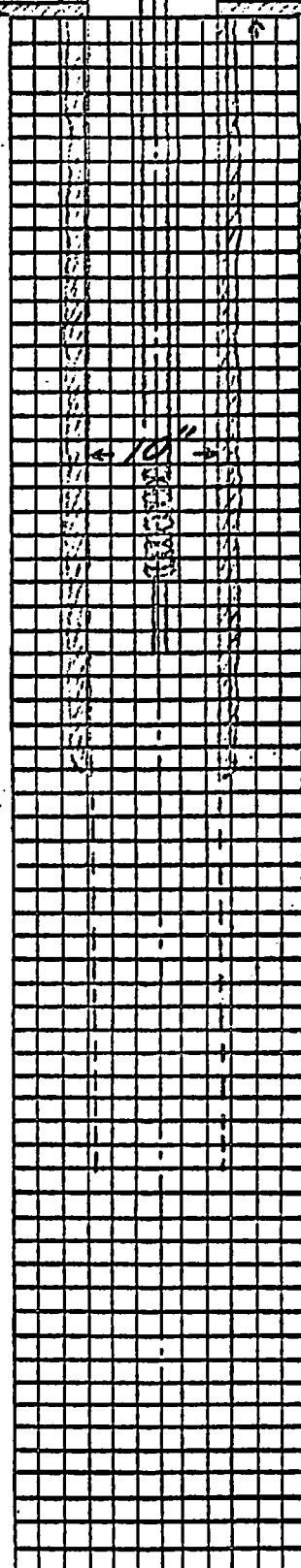
PUMPING TEST - Aug. 12, 1948

TIME	DISTANCE TO WATER	G.P.M.	TEMP. OF
1:50 a.m.	33.9		
1:52	37.6		
1:54		249	51
1:57	38.0		
2:27 p.m.	38.2		
2:53	38.3		
1:10	38.5	240	
1:46	38.5	226	51
2:55	38.7		
3:00	38.8	236	
3:50	39.0	236	
5:15	39.1	249	
5:20	39.0		51
5:25			
5:26	36.0		
5:30	35.4		
5:40	35.0		

REMARKS

Pump turned on

Pump turned off



55' of Cement grout

SL. 33.0'

PL. 39.0'

Bottom of 10' Tail Pipe.

55'

Perforated 20' of 10" casing.

75'

CONSTRUCTION EMPLOYED

1. 12" temporary casing installed to the 33' depth.
2. 10" permanent casing installed from 0 to 75' with pipe being perforated between the 55 and 75' level.
3. Cement grout placed around permanent 10" casing from 55 ft. level to natural ground line. 12" casing withdrawn as grouting preceded.
4. Solid rock encountered at 50 ft. level and cement grouting extended 5 ft. into solid rock.

see 02917-48 sub D.

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

GROUND WATER

Town Rutland County Humboldt Date December 7 1949 XPB

WELL NO. 1 Active Standby Abandoned Replaced by No.

LOCATION: Street Extreme Northeast part of town NW 1/4 SE 1/4 SE 1/4 Sec. 20 T. 92 N.R. 29 BWS: West
Well located in platted street
Lot Block Township Rutland
Completed Aug. 10, 1948
Date Installed in Operation 11/20 1949

OWNERSHIP Municipal
Northwest Drilling Co.
CONTRACTOR LeRoy Ames Address Dakota City, Iowa

DATE RECONDITIONED 19 Contractor Address

CONSTRUCTION EMPLOYED: Drilled -- cased to bottom -- cement grout to 55 ft. level -- 10" permanent casing perforated from 55 to 72 or 75 ft. level. (See sketch and notes on back of sheet)

CURB ELEVATION 1126.3 REFERENCE Sea level

TYPE OF CONSTRUCTION Drilled -- 12" temporary casing removed as grouting completed around 10" permanent casing Depth 75 ft. Diameter 10 in.

CASING: Material Black - steel Condition New
10" casing perforated between 55 & 75' level

SCREEN: Material Length 20 ft. Diameter 10 in. Slot Opening ? in.

WELL SEALED Yes How Cement grouted around pump base Approved Yes

WELL VENTED Yes How 1" turned down screened vent Approved Yes (after vent pipe is repaired)

TYPE OF PUMP Vertical turbine Make Layne-Western Capacity 72 GPM Lubricated Water

DEPTH TO BOULDER 40 + 12 stage bowl section ft. Tail Pipe 10' of 4"

PUMP CONTROL: Manual Automatic Semi-Automatic

STATIC LEVEL 33 ft. Pumping Level 39 ft. Drawdown 6 ft.

OPTIMUM SPECIFIC YIELD 250 GPM Drawdown 6 ft. Time 5 1/2 hrs.

RATE OF DRAWDOWN Slow Rate of Recovery Relatively fast
At end of 16' of 4" discharge pipe

TEMPERATURE OF WATER 51 °F Where Measured Temp. of Atmosphere °F

DRAWDOWN GAUGE INSTALLED Yes -- not calibrated

TOPOGRAPHICAL POSITION OF WELL Flat -- highland

WELL SITE INVESTIGATED Yes Approved Yes 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: Yes Where Iowa Geological Survey

DEPTH TO BED ROCK 55 ft. Depth to Water-bearing Stratum 65 ft.

SOURCE OF WATER: Principal Formation Gilmore City limestone Other None

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Mineral analysis collected Dec. 7, 1949 -- Results not available to date (Field test -- alkalinity 290 -- pH 7.0 -- soap hardness 7.3)

Total Hardness ppm. Total Iron ppm. Sulfates ppm. Fluorine ppm.

Manganese ppm. pH CO₂ ppm.

REMARKS: Pumping equipment -- TF 413 pumphead 4" discharge -- 5hp G.E. motor 1800 RPM, 220 V, 3 phase 60 cycle. Automatic electric pressure switch with optional manual control -- one 12 stage cast iron bowl section, bronze impellers, 7/8" shafting.