

078-04W-13 CBB

#16614

ICWA GEOLOGICAL SURVEY
In Cooperation with U.S. Geological Survey
RECORD OF WELL

Location:

Town: WEST LIBERTY (NE) County MUSCATINE
(SW)

NW NW SW Sec. 13, T. 78, N., 4 (E) R. 4 (W) Twp.

Well name and number #16614Owner WEST LIBERTY CITY WELL #4 Address _____

Tenant _____ Address _____

Contractor HORG & AMES, INC. Address LINCOLN, IOWADrillers A.R. SCOTT - ERVOL FINKDrilling dates JUNE 4, 1964 - SEPT. 24, 1964

Well data:

Altitudes: Drilling curb _____ feet; Land surface _____ feet 662

Determined by _____

Topographic position FLATTotal depth: Reported 1655' feet; Measured 1655' feetDrilling method CABLE TOOLSHole and casing data 103' 2" OF 20" OD CSG.252' OF 18" (LININ) MABUOKATA (P.T. ATKINSON, ELGIN)104' 4" OF 16" OD LININ ST. PERMAN613' 5" OF 10" I.D. (CEMENTED),474' OF 10" O.D. SET @ 1086 (CEMENTED) - PRESSURE GROUTED FROM SURFACE

Original depth to water _____ ft. below _____ Date _____

Source of data _____

HOEG & AMES, Inc.

WELL CONTRACTORS

WELL SUPPLIES

IOWA GEOLOGICAL SURVEY

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LINCOLN, IOWA

OCT 6 - 1964



MEMBER

Phone GR 3-2707

RECORD OF WELL, No. 4.

Owner - City of West Liberty, Iowa.

Address - West Liberty, Iowa.

Location - West Liberty, Muscatine County, Iowa.

Northwest corner of the Fair Grounds.

Started the Well - June 4, 1964.

Finished the Well - September 18, 1964.

Size of Well - 14" to 474 ft. and 10" the rest of the way.

Depth of Well - 1655 feet.

Static Water Level - 97.75 ft.

Drawdown 83.35 ft. pumping 521 gallons per minute.

200.05 ft. pumping 889 gallons per minute.

Pipe installed - 103' of 20" O.D.

252' of 18" O.D.

104'4" of 16" O.D.

613'5" of 10" I.D.

474'10" of 14" O.D.

Drillers - A. K. Scott and Ervol Pink, for Hoeg & Ames, Inc.

Remarks : Drilled 21" hole to 103 ft. and placed 103 ft. of 20" O.D. casing. Drilled 19.5" hole from 103 ft. to 715 ft. Placed 18" O.D. casing from 463 ft. to 715 ft. Drilled 17.5" hole from 715 ft. to 1086 ft. 16" O.D. casing placed from 982 ft. to 1086 ft. 14" O.D. casing was placed above 10" I.D. which was placed from 474 ft. to 1088 ft., and welded to it by means of a welding flange, so that the 10" I.D. casing and the 14" O.D. casing made up one continuous string from the surface of the ground to 1088 ft. This was then pressure grouted from the bottom to the top. Drilled 10" open hole from 1086' to 1655 ft. A 12 hour pumping test was conducted when the well was completed.

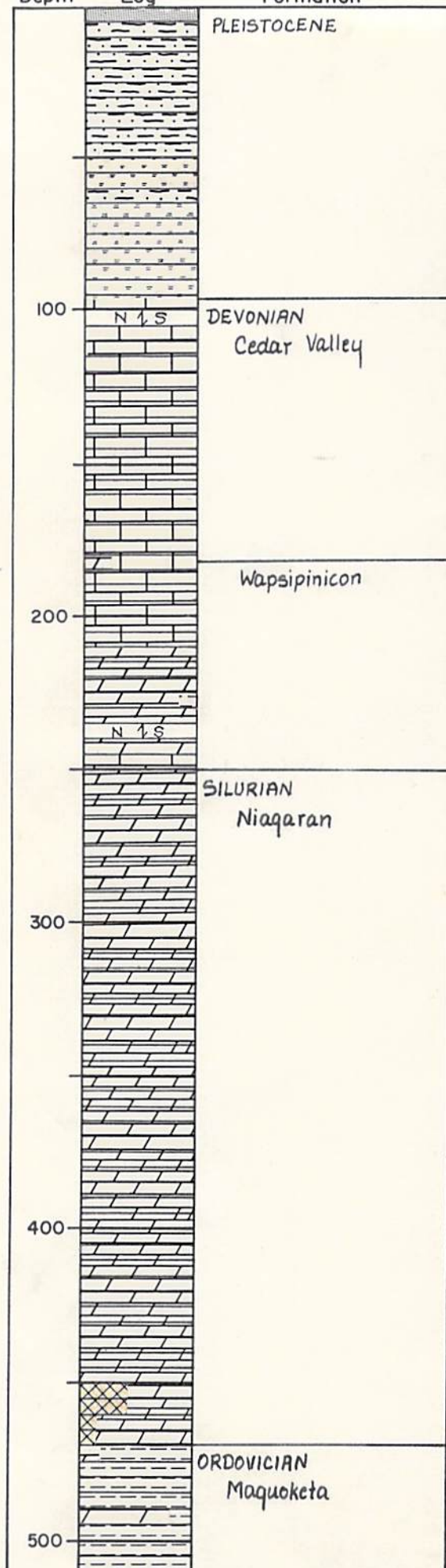
GEOLOGICAL FORMATIONS.

FROM	TO	FORMATION	REMARKS
0'	5'	Black Drift	
5'	65'	Yellow Clay	
65'	97'	Blue Clay	Sandy - little gravel at base/
97'	220'	Gray and Brown Dolomite and Limestone	
220'	260'	Gray & Brown Limestone	Shale seams, water 220'-230'
260'	470'	Gray and Brown Dolomite	
470'	490'	Light Green Shale (hard)	Light brown Dolomite.
490'	555'	Shale and Dolomite Shells	
555'	570'	Grey Dolomite - little Shale	(Water Level 65')
570'	694'	Shale - light Brown lower part.	
694'	705'	Dark Brown Dolomite & Shale.	
705'	725'	Grey Dolomite	
725'	945'	Brown Dolomite	
945'	965'	Grey Dolomite & Shale.	
965'	1007'	Grey & Brown Dolomite	
1007'	1008'	Hard Grey Sand.	
1008'	1023'	Green Shale.	
1023'	1053'	St. Peter Sandstone.	
1053'	1056'	Green Shale	
1056'	1071'	Brown Dolomite	
1071'	1073'	Brown Dolomite and Chert (broken)	
1073'	1086'	Brown Dolomite	
1086'	1200'	Brown and Grey Dolomite	
1200'	1517'	Grey and Brown Sandy Dolomite	(Water head - 100')
1517'	1532'	Sand with hard ribs.	
1532'	1543'	Brown Sandy Dolomite.	Some sand.
1543'	1560'	White Sand - Hard Shells	
1560'	1568'	Dolomite and Sand, broken.	
1568'	1570'	Grey Dolomite - hard	
1570'	1573'	Sand (hard)	
1573'	1580'	Sand, Dolomite, and Chert (broken)	
1580'	1582'	Brown Dolomite, Sandy and hard.	
1582'	1610'	Grey Sandy Dolomite (broken)	
1610'	1620'	Grey and Brown Dolomite	(water from 1568' to 1620
1620'	1655'	Brown Dolomite	Increase in water.

Total Depth - 1655 feet.

Depth Log Formation

Gen. Data



IOWA GEOLOGICAL SURVEY In Cooperation with U. S. GEOLOGICAL SURVEY Iowa City, Iowa			
Name <i>West Liberty City Well #4</i>		State <i>Iowa</i>	
Town <i>West Liberty</i>	County <i>Muscatine</i>	Loc. <i>NW NW SW</i>	
Contractor <i>Hoeq & Ames Inc.</i>		Sec. <i>13</i>	
Drilling Dates <i>6-4-64 — 9-24-64</i>		T. <i>78 N., R. 4 W.</i>	
Casing Record <i>103.2' of 20" O.D.; 252' of 18" liner (Mag)</i> <i>104' 4" of 16" liner (St. Peter);</i> <i>613' 5" of 10" I.D. (cem)</i> <i>4-74' of 10" O.D. @ 1086' (cemented, press.</i> <i>grouted from surf.)</i>			
S.W.L. <i>97.75</i>	G.P.M. <i>578</i>		D.D. <i>83.25</i>
Remarks <i>Temp. 65°</i>			
Logged By <i>N. Church</i> <i>3-15-65</i>		Elev. <i>662</i> T.D. <i>1655</i> I.G.S. No. <i>W-16614</i>	

Explanation
of Colors

- Soil
- Loess, Silt or Siltstone
- Drift
- Sand & Gravel
- Shale
- Sandstone
- Limestone
- Dolomite
- Chert
- Gypsum or Anhydrite
- No Samples

