

IOWA GEOLOGICAL SURVEY  
In Cooperation with U. S. Geological Survey

W-0019

RECORD OF WELL

Location:

Town: Mason City ( N E )  
( S W ); County Carroll  
SE-NW-SE-NW sec. 33 T. 97 N., R. 20 W. Lime Creek Twp.



Well name and number Lehigh Portland Cement Co.

Owner \_\_\_\_\_ Address \_\_\_\_\_

Tenant \_\_\_\_\_ Address \_\_\_\_\_

Contractor Thorpe Bros Well Co. Address Des Moines

Drillers \_\_\_\_\_

Drilling dates Nov. 14, 1923, to Feb. 18, 1924

Well data:

Elevations: Drilling curb 1126 feet; Land surface \_\_\_\_\_ feet

Determined by \_\_\_\_\_

Topographic position Upland

Total depth: Reported \_\_\_\_\_ feet, Measured 1260 feet

Drilling method \_\_\_\_\_

Hole and casing data 14'10" of 20" pipe surface to 14'10" 15'4" of  
(Give amount, size, kind, and depth of all casing; type and  
12" pipe  
position of seals and packers; cementing; how finished--perforated pipe, screen,  
gravel pack, open hole, etc.)

Original depth to water 30 <sup>above</sup> ft. below \_\_\_\_\_ Date \_\_\_\_\_

Original elevation of water level \_\_\_\_\_ ft.; Source of data \_\_\_\_\_

Sources of water: Principal Jordan; Others \_\_\_\_\_

Production data: Date \_\_\_\_\_  
 Static depth to water 30' Measuring point \_\_\_\_\_  
 Pumping level 250 at 700 g.p.m.  
 \_\_\_\_\_ ? \_\_\_\_\_ 875  
 \_\_\_\_\_

Specific capacity \_\_\_\_\_ g.p.m. per ft. drawdown; Temperature 52 °F.

Pump data; Type pump Turbine Column Dia. \_\_\_\_\_ Length 2  
 Cylinder or bowls: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Suction pipe 20  
 Power \_\_\_\_\_ Airline \_\_\_\_\_  
 Estimated rate of production: \_\_\_\_\_ g.p.m. for \_\_\_\_\_ hrs. a day  
 Use of water \_\_\_\_\_

WATER ANALYSES (in parts per million)

Date sampled	<u>Oct. 29, 1937</u>	_____	_____	_____
Sampled by	<u>H. G. H.</u>	_____	_____	_____
Total solids	<u>410</u>	_____	_____	_____
Insoluble matter	<u>9.0</u>	_____	_____	_____
Alkalinity (Meo)	<u>328.0</u>	_____	_____	_____
Alkalinity (Phn)	<u>0.0</u>	_____	_____	_____
pH	<u>7.0</u>	_____	_____	_____
Fe <sub>2</sub> O <sub>3</sub> + Mn <sub>2</sub> O <sub>3</sub> + Al <sub>2</sub> O <sub>3</sub>	<u>1.5</u>	_____	_____	_____
Alkali as sodium	<u>34.6</u>	_____	_____	_____
Calcium	<u>84.7</u>	_____	_____	_____
Magnesium	<u>29.1</u>	_____	_____	_____
Iron (unfiltered)	<u>0.4</u>	_____	_____	_____
Manganese	<u>Tr.</u>	_____	_____	_____
Nitrate	<u>0.00</u>	_____	_____	_____
Fluoride	<u>Tr.</u>	_____	_____	_____
Chloride	<u>8.0</u>	_____	_____	_____
Sulfate	<u>51.0</u>	_____	_____	_____
Bicarbonate	<u>400.2</u>	_____	_____	_____
Hardness (ppm)	<u>331.0</u>	_____	_____	_____
Hardness (gpg)	<u>19.3</u>	_____	_____	_____
Remarks	_____	_____	_____	_____

Laboratory data: Sample storage location \_\_\_\_\_  
 Sample range \_\_\_\_\_ No. spls. \_\_\_\_\_ No. dupls. & cond. \_\_\_\_\_  
 Spls. prepared by \_\_\_\_\_ Washed range \_\_\_\_\_ by \_\_\_\_\_  
 Driller's log and cond. \_\_\_\_\_  
 Insoluble residues: Prepared by \_\_\_\_\_ Studied by \_\_\_\_\_ Strip log \_\_\_\_\_  
 Microscopic study \_\_\_\_\_ strip log Carr  
 Gen. log \_\_\_\_\_ Correl. by \_\_\_\_\_

IOWA GEOLOGICAL SURVEY  
Well Log Record

No. \_\_\_\_\_

County: Cerro Gordo

Name of Well: Lehigh Portland Cement Co. Town: Mason City

Location: SE 1/4, NW 1/4, SE 1/4 NW 1/4 Sec. 33 T. 97 N., R. 20 W. Lime Creek Twp. E.

Curb Elevation: \_\_\_\_\_ Ft. Present Depth \_\_\_\_\_ Ft. Final Depth 1260 Ft.

Static Level: (Depth to Water (Above) Curb) \_\_\_\_\_ Ft. Pumping Level \_\_\_\_\_ Ft. (Below)

Contractor: Thorpe Bros. Well Co., Des Moines Date Drilled: Nov. 14, 1923.  
Feb. 13, 1924.

Description*	F E E T			Description*	F E E T		
	Thick	From	To		Thick	From	To
Soil & broken rock	10	0	10	White sand	30	750	790
White ls.	10	10	20	W. sd. with some bwn. sd & bl. sh.	10	790	800
White ls.	10	20	30	Dolom. ls. with some gry. sh.	10	800	810
Dolomitic ls.	300	30	330	Dolomitic ls.	20	810	830
Argillaceous ls.	30	330	360	Dolom. ls. & some white sd.	60	830	890
Dolomitic ls., Argillaceous	70	360	430	ls. & white sd.	20	890	910
Argillaceous ls., magnesian	20	430	450	Dolom. ls., light color.	10	910	920
Dolomitic ls., Argillaceous	10	450	460	Dolomitic ls., dark gry.	10	920	930
Dolomitic ls.	60	460	520	White sd.	10	930	940
Magnesian ls., light	30	520	550	Dolomitic limestone, gray	20	940	960
Limestone, light	30	550	580	Dolomitic ls., light gray	50	960	1010
Limestone gray	10	580	590	Dolomitic ls., light	70	1010	1080
Limestone, gray, Siliceous	10	590	600	Dolom. ls., light with some sd.	10	1080	1090
Limestone, gray	20	600	620	Dolomitic ls., light gray	10	1090	1100
Limestone light gray	30	620	650	Dolomitic ls., gray	10	1100	1110
Blue sh., soft, some lime	20	650	670	White sand, coarse	40	1110	1150
Blue shale, soft	50	670	720	White sd., fine & coarse	20	1150	1170
White shale - and white sd.	10	720	730	Dolom. ls., gry. with some blue sh.	10	1170	1180
White sd. with some blue sh.	20	730	750	Dolomitic ls. gray	60	1180	1240
White & brown sands	10	750	760	Dark gray, limestone	20	1240	1260 T.D.

\*Abbreviate descriptions; use one line for each formation.

Remarks on water zones and casing: 14'10" of 20" pipe, 154'7" of 12" pipe Surface to 14'10" from portland 603'7" to 745' from portland  
20" hole to 251', 15" hole to 755', 12" hole to 1260'

Temperature: Air \_\_\_\_\_ °F.; Water \_\_\_\_\_ °F., at \_\_\_\_\_ (A.M.) \_\_\_\_\_ (P.M.) 193

Record obtained from Thorpe's Rept. to Co. Recorded by H.G. Hershby  
Sept. 7, 1937

Mason City, Cerro Gordo County

Lehigh Portland Cement Co. Well No.

Subject: Water levels

The following water levels were received from Mr. Kluck,

Feb. 16, 1924 139' = static level  
 April 29, 1936 157' = " "  
 Dec 22, 1936 172'9" = " "

On Sept. 20 an attempt was made to measure the well using the electrical equipment but the water level was below 230' at about 1:30 pm. Elev. of reference point = 1128'3"

Date	Time	Water Level	Interval		Total		Prod. in G.P.M.	Elev. of Water Level
			Change	Time Elapsed	Change	Time Elapsed		
Sept. 29, 1937	12:00	248'11"					879'4"	Using 500' instrument
	12:10	248'10 1/2"						
	12:20	248'10"						
Oct. 6, 1937	9:50	248'7"						
	6	10:02	249'7"					
	6	10:15	248'11"					
Oct. 7	11:51	249'6"						
	" 7	11:56	249'0"					
Oct. 9	12:40	248'4"						
	12:50	248'1"						
	1:00	248'9"						