



# Layne-Western Company, Inc.

WATER SUPPLY CONTRACTORS

705 SO. DUFF AVE.

AMES, IOWA 50010

Phone 515 232-3563

Name of Job City of Storm Lake Date 7-29-88City or Village Storm Lake State \_\_\_\_\_Well No.: 14 Drillers: W. Stocaten, D. Heldt, D. Osterhout

Well Location: \_\_\_\_\_ ft. (\_\_\_\_) and \_\_\_\_\_ ft. (\_\_\_\_) of the \_\_\_\_\_ corner of

Section \_\_\_\_\_, Twp. \_\_\_\_\_ (\_\_\_\_), Range \_\_\_\_\_ (\_\_\_\_) County \_\_\_\_\_

Otherwise located as 250' N.E. of 110 & 7Work Began: June 88 Work Completed: July 88 Well Depth: 464'

All measurements made from existing ground level at time well was drilled.

## Casing Record:

Amount	Dia.	Wt. or Thickness	Material			
<u>142'</u>	<u>32"</u>		<u>Steel</u>	with <u>weld</u>	joints from <u>0</u>	to <u>142'</u>
<u>334</u>	<u>24"</u>	<u>1/2"</u>	<u>Steel</u>	with <u>weld</u>	joints from <u>0</u>	to <u>334'</u>
<u>365</u>	<u>16"</u>	<u>3/8</u>	<u>Steel</u>	<u>weld</u>	<u>0+1'</u>	<u>365</u>

## Screen Record: Type \_\_\_\_\_

Amount	Dia.	Opening	Material			
<u>100'</u>	<u>16"</u>		<u>Stainless Steel</u>	with <u>weld</u>	joints from <u>362.5'</u>	to <u>362.5'</u>
				with _____	joints from _____	to _____

Type of Seal at Bottom 1 1/2 86" steel blank with 3/4" welded steel plate

## Hole Record:

<u>36"</u>	inch from <u>0</u>	to <u>142'</u>
<u>29"</u>	inch from <u>142'</u>	to <u>334</u>
<u>23"</u>	<u>334'</u>	<u>464'</u>

## Gravel Pack Record:

Amount	Size	Source	From	To
<u>50T</u>		<u>Northern gravel</u>	<u>283</u>	<u>464</u>

Cementing Record: 0-334' 40 ydsBackfill Record: None

## WELL LOG

Feet	Feet	Description
0	to 9	Brn clay & top soil
9	to 10'	red sand & gravel, Boulder & clay
10	to 97	Blue Gray till with some boulders
97	to 101	med sand & Gravel
101	to 106	Gray till
106	to 139.86	Sand & Gravel
139.86	to 215	Blue Gray till
215	to 217	Gray & Brown till with boulders
217	to 234	Gray till & boulders, some sandstone
334	to 370	Brn sandstone
370	to 378	Rusty Red sandstone
378	to 448	Brn sandstone
448	to 487	Coarse sandstone & small gravel
487	to 488	Gray shale
448	to 489	Rusty Red and brn sandstone
489	to 506	Brn sandstone
506	to	Bottom limestone
to		
to		
to		
to		
to		
to		
to		

Well Test Data: Static Level 262 ; pumping level 308 after 24 hours pumping at 1507 g.p.m.

Length of test 24 hrs. See Well Test Data Sheet Dated 7-26-88

REMARKS:



RECEIVED SEP 22 1988

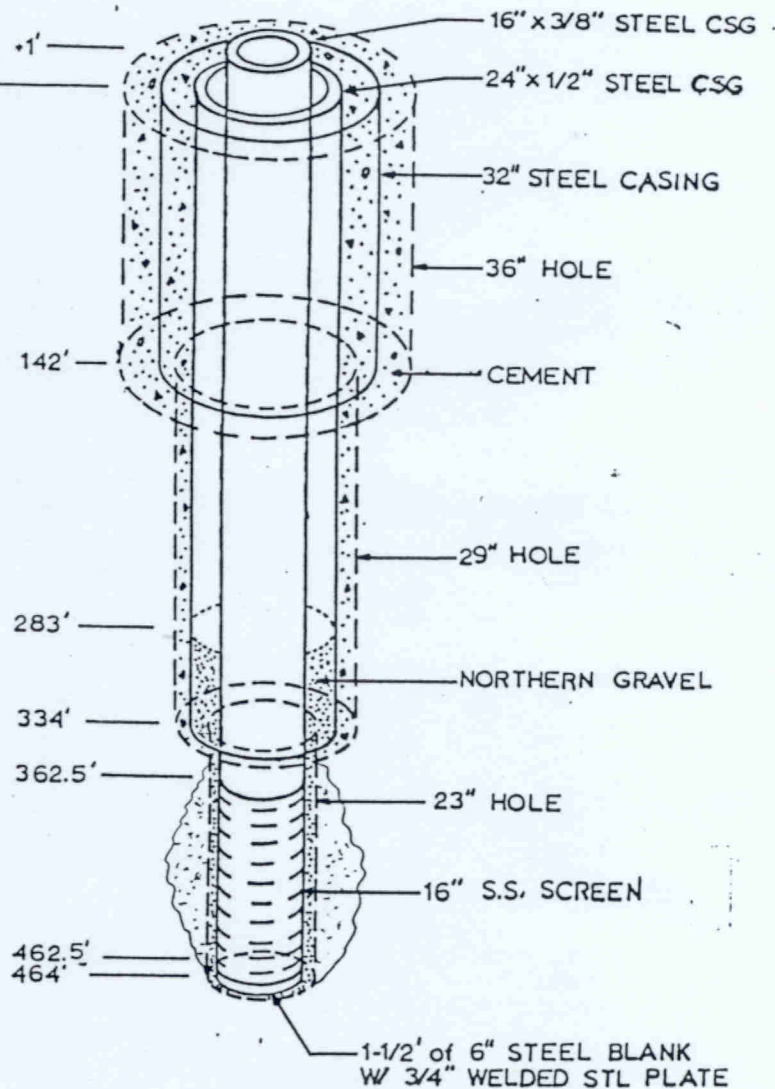
LW Co., Inc. Ames, IA.

7/88

GEOLOGICAL LOG

CONSTRUCTION DETAIL

BRWN CLAY AND TOP SOIL	SURFACE
	9'
BLUE GRAY TILL SAND AND GRAVEL BOULDERS AND CLAY	97'
SAND AND GRAVEL GRAY TILL	139.86'
BLUE GRAY TILL	215'
BRWNGRY TILL W/ BLDERS	234'
BROWN, RUSTY RED, AND COASE SANDSTONE	283'
SMALL GRAVEL	334'
	362.5'
	448'
SMALL GRAVEL GRAY SHALE	488'
BRWN, RUSTY RED SANDSTONE	506'
BOTTOM LIMESTONE	



23" OPEN HOLE WAS DEVELOPED WITH 16 HOURS OF AIRLIFT DEVELOPMENT FOLLOWED BY 8 SINGLE STRANDS OF PRIMACORD EXPLOSIVE AND 16 ADDITIONAL HOURS OF AIRLIFT DEVELOPMENT.