MASTER CARD-A 9-26-69

STATE	COUNTY	LATITUDE DEG.	LATITUDE MIN.	LATITUDE SEC.	N. or S	LONGITUDE DEG.	LONGITUDE MIN.	LONGITUDE SEC.	SEQ. NO.
1 2	3 4	5 6	7 8	9 10	11	12 13 14	15 16	17 18	19
19	11	42	38	40	N	095	13	40	1

WELL SCHEDULE

US GEOLOGICAL SURVEY

IOWA DISTRICT WRD

WELL NO. 090-37W-04BB CO. BUENA VISTA

OWNER STORM LAKE CITY #2 (1939) ADDRESS STORM LAKE, IA.

DRILLER THORPE WELL CO. DATE DRLD. OCT. 1939

MAP 1:63,360 COUNTY HWY.

SOURCE OF DATA FILE

DESCRIPTION M. P. _____ LSD _____ FEET (ABOVE) (BELOW) LSD 1399

CONTINUED FROM ABOVE	ACCURACY	LOCAL WELL NUMBER T.	R.	E/W	SEC.	QUARTERS	LOCAL USE W-NUMBER	OPTIONAL	OWNER OR NAME	OWNERSHIP	WATER USE	WELL USE	WELL DATA	FREQ. W/L	FIELD CHAR.	HYD. LAB.	QW-DATA	QW-FREQ.	PUMPAGE	APERTURE	LOG DATA	CARD DESIG.
	20	21 22 23	24 25	26	27 28	29 30 31 32 33 34	35 36 37 38 39	40 41 42 43 44 45 46 47 48 49 50 51	52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	67	68	69	70	71	72	73	74	75	76	77	78 79	80
	3	090	37	W	04	BB	01035	//39CITY	2ST ØRM LAKE IØWA	M	P	W	3	Ø			C	I			G	A

WELL-DESCRIPTION CARD - B

DUPLICATE CARD A CC 1-19	DEPTH OF WELL	ACCURACY	DEPTH CASED OR FIRST PERF.	DIAM. INCHES	WELL FINISH	METH. DRILLED	YEAR DRILLED	PUMP SETTING	METH. LIFT	DEEP/SHALLOW	POWER	ALTITUDE OF LSD (FEET)	ACCURACY	WATER LEVEL (FEET)	ACCURACY	DATE MONTH	DATE YEAR	YIELD OF WELL (GPM)	METH. DET.	DRAW-DOWN (FEET)	ACCURACY	PUMPING PERIOD (HOURS)	QUALITY OF WATER IRON	SULF.	CHLOR.	HARD	S.P. COND.	TEMP.	DATE SAMPLED	CARD DESIG.
	20 21 22 23	24	25 26 27 28	29 30	31	32	33 34 35	36 37 38	39	40	41	42 43 44 45 46	47	48 49 50 51	52	53 54	55	56 57 58 59 60	61	62 63 64	65	66 67 68	69	70	71	72	73	74 75 76	77 78 79	80
	107	3	62	20	G	B	939	50	T	D	U	1397	9		D	03	9	1500		1			6	4	1	7	4	58	96	5	B

HYDROGEOLOGIC CARD - C

DUPLICATE CARD A CC 1-19	PHYSIOGRAPHY PROV.	SEC.	DRAINAGE BASIN	SUBBASIN	TOPO SETTING	MAJOR AQUIFER SYSTEM	SERIES USGS	SERIES IGS	UNIT	LITHOLOGY	ORIG.	THICKNESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	MINOR AQUIFER SYSTEM	SERIES USGS	SERIES IGS	UNIT	LITHOLOGY	ORIG.	THICKNESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	DEPTH TO CONSOLIDATED ROCK	SOURCE	DEPTH TO BASEMENT	SOURCE	SURF. MAT. LITHOLOGY	SURF. MAT. INFIL.	COEF. TRAN. SIG. FIG.	COEF. TRAN. XIO	COEF. STOR. SIG. FIG.	COEF. STOR. XIO-	GEOL. CARDS CARD DESIG.
	20 21	22	23 24 25	26	27	28	29	30	31	32 33	34	35 36 37	38 39 40	41 42 43	44	45	46	47	48 49	50	51 52 53	54 55 56	57 58 59	60 61 62 63	64	65 66 67 68	69	70 71	72	73 74	75	76 77	78	79	80
	1	2	B25	A	V	Q	G	G	X	R	O			62														CT	4						C

CASING AND SCREEN (SIZE, TYPE, INTERVALS):

WELL DUG BY HAND TO SAND; THEN BORED

48' OF 12' DIAM. HOLE

GRAVEL PACK 8' IN DIAM.

20" SCREEN 45' LONG, CASED WITH STEEL PIPE TO TOP AND CEMENT SEALED.

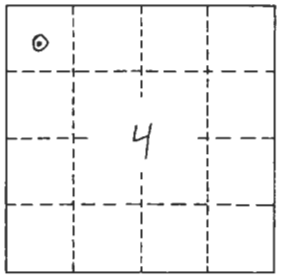
D.D. 35FT. @ 802 GPM

CODED BY D. AARONSON DATE 28 APRIL 1970

PUNCHED BY T DATE _____

VERIFIED BY _____ DATE _____

SKETCH ON REVERSE: YES _____ NO ✓

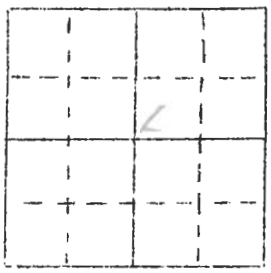


WELL NO 090-37W-04BB

W-1035

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

RECORD OF WELL



Location:

Town: Storm Lake (N E) (S W); County Buena Vista

NW-NW sec. 4 T. 90 N., R. 37 E. W. Storm Lake Twp.

Well name and number City Well No 2 250' W of well #1

Owner _____ Address _____

Tenant _____ Address _____

Contractor Thorpe Well Co Address Des Moines

Drillers Walker

Drilling dates Oct 193

Well data:

Elevations: Drilling curb 1379 feet; Land surface _____ feet

5' lower than city well #1

Determined by Altimeter

Topographic position Valley flood plain

Total depth: Reported 107 feet, Measured _____ feet

Drilling method dug by hand to sand + then bored

Hole and casing data Gravel pack 8' in diam
(Give amount, size, kind, and depth of all casing; type and position of seals and packers; cementing; how finished--perforated pipe, screen, gravel pack, open hole, etc.)

18' of 12' diam. hole.
20" screen 45' long, cased with steel pipe to top and cement sealed

4 side holes 10" diam.

Original depth to water 9 ft. below ~~above~~ ground Date _____

Original elevation of water level _____ ft.; Source of data _____

Sources of water: Principal _____; Others _____

CASING DIAGRAM

Vertical scale _____

LOG

Production data: Date _____

Static depth to water 4' Measuring point Surface

Pumping level 44' at 802.3 g.p.m.

1500 tested

Specific capacity _____ g.p.m. per ft. drawdown; Temperature 49 °F.

Pump data; Type pump Turbine Column Dia. _____ Length 50'

Cylinder or bowls: Dia. _____ Length _____ Suction pipe _____

Power 1740 R.P.M. 15 h.p. Airline _____

Estimated rate of production: 800 g.p.m. for 15 hrs. a day

Use of water city supply

WATER ANALYSES (in parts per million)

Date sampled	5/4/43			
Sampled by	A E W			
Total solids	788			
Insoluble matter	0.0			
Alkalinity (Meo)	423.0			
Alkalinity (Phn)	0.0			
pH	7.3			
Fe_2O_3+ Mn_2O_3+Al_2O_3	1.0			
Alkali as sodium	22.4			
Calcium	155.8			
Magnesium	53.9			
Iron (unfiltered)	1.6			
Manganese	tr.			
Nitrate	0.0			
Fluoride	0.5			
Chloride	1.0			
Sulfate	232.7			
Bicarbonate	517.3			
Hardness (ppm)	614			
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location _____

Sample range 0-104 No. spls. 23 No. dupls. & cond. 23 C

Spls. prepared by Yoho Washed range _____ by _____

Driller's log and cond. _____

Insoluble residues: Prepared by _____ Studied by _____ Strip log _____

Microscopic study _____ strip log 5-26-43

Gen. log _____ Correl. by _____

WATER LEVEL DATA

Measuring point _____

Date	Depth to water	Altitude	Remarks

REMARKS

IOWA GEOLOGICAL SURVEY
Water Well Data Sheet

Survey Number W-1035

Town Storm Lake (2 W. of Center) County Buena Vista T. 90 N., R. 37 W.

Name Town Test Well #2 Location NW ¼ NW ¼, Sec. 5 4

Contractor Thorpe Well Co. Driller Walker Use

Construction Drilling Dates Oct. 1939. Drilling Depth 10

Topog. Valley flood plain Curb Elev. 5' below Ref. present city well Total Depth

Final Static Level above / below curb Pumping Level Draw down gpm Time pumped Date

Depth to bot. pump ft. with ft. suction pipe. Calc. drawdown g/ft. Prin. Prod.

Producing Horizons

Water levels and pumping tests on various horizons during drilling:

Depth Range	Stat. Level	Pump Level	Draw down	gpm.	Temp.	Producing horizons	Producing formations	Formations cased out

Additional information Located about 250' S.W. of present Town well.

Laboratory Data

Sample range 0-104 Number samples 23 Number Duplicates 23 Cond. Good

Log Yes / No, Cond. — Boxed Yes Range 0-104 Date Oct 30, 1939.

Remarks

Microscopic Study Range		Strip Log	Gen. Log	Blue Print	Samples Washed
Insol. Res. Study Range		Strip Log	Gen. Log	Insol. Res. Prepared	Well Corel.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) Q66X
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA (19) County: BUENA VIST (11) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 (12–18) Seq. No. 1 (19) Date M D Y 05 11 43 (20–25)

Sampling Depth 107 (26–29) Type 1 (30) $Kx10^6$ (31–35) pH 7.3 (36–38) Temp. °F (39–41)

SiO_2 (42–44) Ca 156 (45–49) Mg 54 (50–53) Na + K 22 (54–58) K .C (59–61)

HCO_3 517 (62–65) CO_3 (66–67) SO_4 233 (68–72) Cl 10 (73–78) Source No. 3 Q (79–80)

Card R

Duplicate Columns 1-25 from Card Q

F .5 (26–28) NO_3 0 (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe 1.6 (42–45)

Mn (46–49) Cu (50–52) Pb (53–54) Zn (55–57)

Solids Determined 788 (58–63) Calc. (64–69) Hardness Ca,Mg 614 (70–73) Non-Carb. 191 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 423 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date:

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA [19] (1-2) County: BUENA VISTA [11] (3-4) Town: STORM LAKE, IOWA

Well No. Latitude [42 38 40 N] (5-11) Longitude [095 13 40] (12-18) Seq. No. [1] (19) Date M D Y [02 19 48] (20-25)

Sampling Depth [107] (26-29) Type [1] (30) Kx10^6 [ ] (31-35) pH [7.3] (36-38) Temp. °F [ ] (39-41)

SiO_2 [.] (42-44) Ca [138] (45-49) Mg [39.] (50-53) Na +K [32.] (54-58) K [.C] (59-61)

HCO_3 [449] (62-65) CO_3 [0] (66-67) SO_4 [194.] (68-72) Cl [10.] (73-78) Source No. [3] (79) [Q] (80)

Card R

Duplicate Columns 1-25 from Card Q

F [.4] (26-28) NO_3 [0.] (29-32) PO_4 [.] (33-35) B [.] (36-38) Al [.] (39-41) Fe [2.0] (42-45)

Mn [0.] (46-49) Cu [.] (50-52) Pb [.] (53-54) Zn [.] (55-57)

Solids Determined [800] (58-63) Calc. [ ] (64-69) Hardness Ca,Mg [508] (70-73) Non-Carb. [140] (74-77)

Color [ ] (78-79) No. [R] (80)

Card S

Duplicate Columns 1-25 from Card Q

Br [.] (26-28) I [.] (29-31) Alk. as $CaCO_3$ [368] (32-35) Free CO_2 [ ] (36-38) SAR [.] (39-41)

RSC [ ] (42-44) ABS [.] (45-47) [.] (48-50) [ ] (51-54)

Alpha (pc/l) [ ] (55-57) Beta (pc/l) [ ] (58-60) Ra (pc/l) [.] (61-63) U (ug/l) [.] (64-66)

No. [S] (80)

Recorded by: D. AARONSON

Punched by: T Date:

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04 BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA (19) County: BUENA VISTA (11) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 (12–18) Seq. No. 1 (19) Date M D Y 03 25 52 (20–25)

Sampling Depth 107 (26–29) Type 1 (30) Kx10⁶ 916 (31–35) pH 7.4 (36–38) Temp. °F (39–41)

SiO_2 (42–44) Ca 125 (45–49) Mg 39 (50–53) Na 23 (54–58) K 4.2 (59–61) Source No. 3 Q (79–80)

HCO_3 405 (62–65) CO_3 (66–67) SO_4 165 (68–72) Cl 16 (73–78)

Card R

Duplicate Columns 1-25 from Card Q

F .5 (26–28) NO_3 0 (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe .37 (42–45)

Mn .10 (46–49) Cu (50–52) Pb (53–54) Zn (55–57)

Solids Determined 615 (58–63) Calc. (64–69) Hardness Ca,Mg 473 (70–73) Non-Carb. 141 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 332 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date:

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA [19] (1 2) County: BUENA VISTA [11] (3 4) Town: STORM LAKE, IOWA

Well No. Latitude [4238400 N] (5–11) Longitude [095134 0] (12–18) Seq. No. [1] (19) Date M D Y [050554] (20–25)

Sampling Depth [107] (26–29) Type [1] (30) Kx10^6 [806] (31–35) pH [7.9] (36–38) Temp. °F [ ] (39–41)

SiO_2 [.] (42–44) Ca [135.] (45–49) Mg [42.] (50–53) Na [24.] (54–58) K [4.0] (59–61)

HCO_3 [393] (62–65) CO_3 [0] (66 67) SO_4 [200.] (68–72) Cl [12.] (73–78) Source No. [3] [Q] (79 80)

Card R

Duplicate Columns 1-25 from Card Q

F [.3] (26–28) NO_3 [53.] (29–32) PO_4 [.] (33–35) B [.] (36–38) Al [.] (39–41) Fe [3.4] (42–45)

Mn [.1] (46–49) Cu [.] (50–52) Pb [.] (53 54) Zn [.] (55–57)

Solids Determined [676] (58–63) Calc. [ ] (64–69) Ca,Mg [511] (70–73) Hardness Non-Carb. [189] (74–77)

Color [ ] (78 79) No. [R] (80)

Card S

Duplicate Columns 1-25 from Card Q

Br [.] (26–28) I [.] (29–31) Alk. as $CaCO_3$ [322] (32–35) Free CO_2 [ ] (36–38) SAR [.] (39–41)

RSC [ ] (42–44) ABS [.] (45–47) [.] (48–50) [ ] (51–54)

Alpha (pc/l) [ ] (55–57) Beta (pc/l) [ ] (58–60) Ra (pc/l) [.] (61–63) U (ug/l) [.] (64–66)

No. [S] (80)

Recorded by: D. AARONSON

Punched by: I Date: 11

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA (19) County: BUENA VISTA (111) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 (12–18) Seq. No. 1 (19) Date M 12 D 1 Y 56 (20–25)

Sampling Depth 07 (26–29) Type 1 (30) Kx10⁶ 790 (31–35) pH 7.5 (36–38) Temp. °F 50 (39–41)

SiO_2 34. (42–44) Ca 103. (45–49) Mg 34. (50–53) Na 21. (54–58) K 9.2 (59–61)

HCO_3 364 (62–65) CO_3 0 (66–67) SO_4 117. (68–72) Cl 15. (73–78) Source No. 3 Q (79–80)

Card R

Duplicate Columns 1-25 from Card Q

F .4 (26–28) NO_3 57. (29–32) PO_4 . (33–35) B . (36–38) Al . (39–41) Fe 59. (42–45)

Mn .17 (46–49) Cu . (50–52) Pb . (53–54) Zn . (55–57)

Solids Determined 520 (58–63) Calc. (64–69) Ca,Mg 397 (70–73) Hardness Non-Carb. 99 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br . (26–28) I . (29–31) Alk. as $CaCO_3$ 298 (32–35) Free CO_2 (36–38) SAR . (39–41)

RSC (42–44) ABS . (45–47) . (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) . (61–63) U (ug/l) . (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date: 11

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number

Card Q

State: IOWA (19) County: BUENA VISTA (11) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 0 (12–18) Seq. No. 1 (19) Date M D Y 03 27 58 (20–25)

Sampling Depth 107 (26–29) Type 1 (30) Kx10^6 850 (31–35) pH 7.4 (36–38) Temp. °F 55 (39–41)

SiO_2 37. (42–44) Ca 110. (45–49) Mg 40. (50–53) Na 23. (54–58) K 5.0 (59–61)

HCO_3 390 (62–65) CO_3 0 (66–67) SO_4 157. (68–72) Cl 15. (73–78) Source No. 3 Q (79–80)

Card R

Duplicate Columns 1-25 from Card Q

F .4 (26–28) NO_3 .9 (29–32) PO_4 . (33–35) B . (36–38) Al . (39–41) Fe 2.4 (42–45)

Mn .14 (46–49) Cu . (50–52) Pb . (53–54) Zn . (55–57)

Determined Solids 621 (58–63) Calc. (64–69) Ca,Mg Hardness 439 (70–73) Non-Carb. 119 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br . (26–28) I . (29–31) Alk. as $CaCO_3$ 320 (32–35) Free CO_2 (36–38) SAR . (39–41)

RSC (42–44) ABS . (45–47) . (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) . (61–63) U (ug/l) . (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date: VW

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 090-37W-04BB
Aquifer Code(s) Q666X
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Card Q

State: IOWA (19) County: BUENA VISTA (111) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 0 (12–18) Seq. No. 1 (19) Date M D Y 09 28 60 (20–25)

Sampling Depth 107 (26–29) Type 1 (30) Kx10⁶ 925 (31–35) pH 7.2 (36–38) Temp. °F 54 (39–41)

SiO_2 37. (42–44) Ca 129. (45–49) Mg 35. (50–53) Na 22. (54–58) K 4.4 (59–61)

Source No. 3 Q (79–80)

HCO_3 410 (62–65) CO_3 0 (66–67) SO_4 162. (68–72) Cl 20. (73–78)

Card R

Duplicate Columns 1-25 from Card Q

F .4 (26–28) NO_3 62. (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe 2.8 (42–45)

Mn .13 (46–49) Cu (50–52) Pb (53–54) Zn (55–57)

Solids Determined 629 (58–63) Calc. (64–69) Hardness Ca,Mg 468 (70–73) Non-Carb. 132 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 336 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: _____ Date: _____

Published: _____

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Local Well No. 090-37W-04BB
Aquifer Code(s) QGGX
Owner's Name STORM LAKE CITY #2 (1939)
W Number 01035

Water Quality
(ppm)

Card Q

State: IOWA (19) County: BUENA VISTA (11) Town: STORM LAKE, IOWA

Well No. Latitude 42 38 40 N (5–11) Longitude 095 13 40 0 (12–18) Seq. No. 1 (19) Date M D Y 09 29 65 (20–25)

Sampling Depth 107 (26–29) Type 1 (30) Kx10^6 860 (31–35) pH 7.3 (36–38) Temp. °F 58 (39–41)

SiO_2 34. (42–44) Ca 108. (45–49) Mg 36. (50–53) Na 19. (54–58) K 4.1 (59–61)

Source No. 3 Q (79–80)

HCO_3 386 (62–65) CO_3 0 (66–67) SO_4 1140. (68–72) Cl 22. (73–78)

Card R

Duplicate Columns 1-25 from Card Q

F .4 (26–28) NO_3 .1 (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe 3.1 (42–45)

Mn .15 (46–49) Cu (50–52) Pb (53–54) Zn (55–57)

Solids Determined 572 (58–63) Calc. (64–69) Hardness Ca,Mg 420 (70–73) Non-Carb. 104 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 316 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date:

Published:

W# 1035

STATE HYGIENIC LABORATORY, IOWA CITY, IOWA
WATER LABORATORY DIVISION
MINERAL ANALYSIS

LAB. NO. 24648
MINERAL NO. 5559
4-3 19 58

TOWN Storm Lake COUNTY Buena Vista
OWNER OF SUPPLY City of Storm Lake
COLLECTOR'S NAME Fred H. Dorheim
DATE COLLECTED 3-27-58 DATE RECEIVED 3-31-58
REPORT TO: NAME Dr. H. G. Hershey, Iowa Geological Survey
ADDRESS Geology Annex, Iowa City, Iowa

FIELD DATA

SOURCE: WELL NAME, NUMBER, POINT OF COLLECTION, DEPTH, CONSTRUCTION DATE, ETC.,
Storm Lake City Well #2
(Raw water)

WELL PUMPED 4 HRS. AT 1800 GPM. DATE OF PREVIOUS SAMPLE
WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED Yes
TEMPERATURE °C 13.3 ALKALINITY (ppm $CaCO_3$) P T pH

LABORATORY ANALYSIS
(PARTS PER MILLION)

SPECIFIC CONDUCTANCE K AT 25°C 84.7 x 10^{-5}. TURBIDITY
DISSOLVED SOLIDS 621 **SOLUBLE IRON (Fe)** 2.4
TOTAL SOLIDS 621 **SILICA (SiO_2)** 36.6 TOTAL IRON (Fe) 2.4
ALKALINITY (ppm $CaCO_3$) P None T 320 pH 7.4 DATE 3-31-58

POSITIVE IONS		NEGATIVE IONS	
K+	5.0	NO_3 — asN	0.2
Na+	22.6	F−	0.35
Ca++	110	Cl−	15
Mg++	40.1	SO_4−−	157
Mn++	0.14	HCO_3−	390
Al+++		CO_3−−	None

HARDNESS AS $CaCO_3$ 445 ppm 26.0 gpg
Slight yellow turbidity when received.

ANALYST Dougherty
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R. L. MORRIS
PRINCIPAL CHEMIST