MUNICIPALITY: Garrison 1590 COUNTY: Benton (6) 011

WELL NUMBER: 1, Stand-by well, Cannery well W-39914

LOCATION: SW, NW, SW, NW, SW, Sec. 28, T. 85 N., R. 11 W. in west part of old cannery bldg.

ELEVATION: 869' ± 1' topo TOPOGRAPHIC MAP: Garrison 7½'

TOTAL DEPTH: 1435' DIAMETER: TYPE:
CONTRACTOR: Charles D. Nolan DATE COMPLETED: - - 1926
CASING SCHEDULE: 0'-125' of 12" 49' of 12" set to rock
125'-316' of 8" 191' of 8" through Maquoketa shale

S.W.L.: 21' (1926) P.L.: 42' (1926) PUMPING RATE: 125 gpm (1926)

PUMP CAPACITY: turbine (valved down) 60 gpm (1972)

MAIN WATER: 1375'-1435' UNIT: Silurian 350 SLRN
GEOLOGY: Ordovician 360 ORDV
Cambrian 370 CMBR

REMARKS: Purchased from cannery circa 1971/1972

Presently Abandoned circa 1983-1986

MUNICIPAL AUTHORITY: City of Garrison William "Rudy" Readnour, Supt.
Garrison, IA 52229

WATER USE: ,20,000 avg gpd (6-18-83--12-2-86) max gpd ,47,000 (- -)
POPULATION SERVED: ,383 POPULATION EQUIVALENT (@ 100 gpcd): ,200

1986 Garrison derives its water from wells #2 stand-by & #3

TREATMENT: A, Chlorination, IFps

IOWA
STATE DEPARTMENT OF HEALTH
Environmental Engineering Service
Kenneth M. [illegible], M.P.H., Director
Paul J. Houser, M.S., P.E., Chief
DES MOINES

Place Garrison, Iowa Date January 12, 1972

Report on Site Survey of the Well Located in the Old Cannery Building

By Ron Stellick Approved Kenneth M. Karch Director

Date of report January 17, 1972

Due to a telephone request from Mr. Paul Turner, Water Superintendent at Garrison, a site survey of the well located at the old cannery building was made. The town now owns the well and wants to know what would have to be done to have it become an approved water source.

Mr. Clayton Henry, Mayor, Mr. William Readnour, Councilman, and Mr. Paul Turner, Water Superintendent, were interviewed and accompanied me on this survey.

The well is equipped with a Johnson Turbine Pump. The pump has been valved down so that it is only pumping around 60 gpm. When the well is pumped at around 90 gpm, they start getting some white sand.

This well is not yet connected to the town's distribution system. When they have a big fire in town or have trouble with their active well, they run a hose from the pump discharge line of this well over to a fire hydrant.

There is an 8 in. sewer main located about 40 ft. north of the well and in the middle of the street. After making phone calls to two prior councilmen, it was established that this 8 in. sewer main is cast iron pipe. The exact amount of cast iron pipe was not known.

There is an old dug well located approximately 40 ft. southeast of the well and in the boiler room of the old cannery.

The motor on the well is located on the top of a concrete reservoir, which is approximately 20' x 40' x 14'. The casing of the well now runs down through this empty reservoir. The town plans on doing some grading around this reservoir, put some doors into it, windows, etc., and make this into a pumphouse. The casing on the well would be cut off, and the motor would be lowered into the reservoir and mounted onto a concrete pedestal. Part of this pumphouse would be under the ground, and part would not be.

Mr. Paul Turner reported that he has been taking a water sample monthly from this well since he started working for the town approximately 16 months ago, and that all the water samples were bacterially satisfactory. A water sample taken from this well by Mr. William Grau, former Water Superintendent, on December 21, 1970, for a complete mineral analysis, showed the total iron content of this well at 0.92. No water samples were taken at the time of this survey because of the cold weather and the possibility of causing ice problems when pumping out onto the ground.

Below I have listed my comments and recommendations:

(1) Check with a reputable well drilling company to see if they have any suggestions on clearing up the sand problem that is encountered when the well is pumped too hard.

(2) There should be no sanitary or storm sewers within 20 ft. of the well. All sewers more than 20 ft. and less than 75 ft. from the well should be cast iron pipe and water tested lead or mechanical joints.

Any floor drains in the pumphouse, draining to the ground surface through sidewall at floor elevation, are approved. Any floor drains connected to the sanitary or storm sewer are: (a) Not permitted within 10 ft. of well; (b) Drain more than 10 ft. and less than 20 ft. from well constructed of cast iron pipe with lead or mechanical joints and encased in 4 in. of concrete; (c) Drain more than 20 ft. and less than 75 ft. from well constructed of cast iron pipe and water tested lead or mechanical joints.

(3) The old dug well located approximately 40 ft. southeast of the well should be filled with impervious material to a depth of at least 20 ft. and capped with concrete.

(4) The State Health Department does not approve wells located in pits. Pumps, motors, switches, etc., corrode easily when located in a wet and damp place. This reservoir that is to be converted into a pumphouse would have to be remodeled so that there would be adequate ventilation and a door opening at ground level. Also, the concrete reservoir should be checked to see that it is structurally safe. The area around the reservoir should be graded and leveled off, so that at least half or more of the reservoir is not under the ground surface.

The meter on the well should be mounted on a concrete pedestal that is at least 12 in. above the pumphouse floor.

An air vent should be provided on the well. It should not be less than 1½ in. in diameter with inlet at least 12 in. above the floor, turned down, and screened with 20 mesh copper screen or equivalent. A sampling tap should be installed on the discharge line and located after the check and gate valves or where not subject to back siphonage.

(5) It appears that the water from this well has more iron in it than the existing active well. Either iron removal filters will be needed at the site or a line would have to be extended over to the existing iron removal plant located about 4 or 5 blocks away. Plans and specifications on any proposed construction should be submitted and approved prior to construction.

Respectfully submitted,

Ron Stellick

Ron Stellick
Sanitarian

RHS/mc

1/12/72

Well of Iowa Canning Company

In 1926 a well at least 1435 ft. deep was completed for this company by Charles D. Dolan of Cedar Rapids. The principal supply was found from 1375 to 1435 ft. During the drilling of the well, it is said, water stood about 12 ft. below the curb until the main water bed was reached when it fell to 21 ft. below the same level.

On testing the well yielded to the capacity of the pump, 125 gpm, with the pumping cylinder set 80 ft. below the curb and the drawdown to 42 ft. below the curb.

Forty-nine ft. of 12" casing is set to rock and 191 ft. of 8" casing through the Maquoketa Shale. The cost of the well was $8610.

In 1947 the Green Giant Company, formerly Minnesota Valley Canning Company, purchased the Iowa Canning Company plant located in Garrison, Iowa.

Description of samples of cuttings from well of Iowa Canning Company, Garrison:

Dolomite, in fine buff sand	450
Shale blue, calcareous (Maquoketa)	529, 545, 595
Limestone, nonmagnesian, Galena facies 14 samples	690, 975
Dolomite, Prairie du Chien facies, some rounded grains of quartz sand, chert at 1095	1090, 1095
Dolomite and sand, as above; some blue-green shale, slightly calcareous shale, in light blue-gray concreted masses, highly dolomite with minute crystals of dolomite; some fine quartz sand and flakes of blue-green shale	125, 1235, 1255
Dolomite, some grains of quartz sand	1315, 1340
Dolomite and chert, Prairie du Chien facies	1400

(The above report is from Mr. R. D. Ridenour, 737 Elm Court, Le Sueur, Minn.)

W-39914 (samples originally marked as W-29; reassigned 4/6/2010)
Bill J. Bunker 4/6/2010

Stratigraphic unit	Sample Interval	Description
Quat/Dev/Sil undiff.	128	
	345	Dol, lt. yel org; sh, gr grn
Maquoketa	525	Sh, gr grn
	595	Sh, gr grn
	640	Dol, dk yel brn
	645	Sh, gr grn
Galena/Decorah/Platteville/Glenwood/St. Peter undiff.	715	Dol, lt yel brn, oxidized pyrite
	720	Dol, lt. yel brn, trace oxidized pyrite
	730	Dol, lt yel brn, f-m
	745	Dol, lt yel brn, cin specks
	755	Dol, lt yel brn
	795	Dol, yel brn, cin specks, oxidized pyrite
	800	Dol, yel brn, f-m
	835	Dol, lt yel brn, f-m, oxidized pyrite
	850	Dol, lt yel brn, f-m
	925	Dol, lt yel brn, f-m, sli sandy
	945	Dol, dk yel brn, pt oxidized
	950	Dol, lt yel brn -> yel brn, f-m
	975	Dol, yel brn, f-m, oxidized interval
Prairie du Chien	1075	Dol, pale yel brn, f-m
	1090	Dol, pale yel brn, f-m; cht, wh, T
	1150	Dol, pale yel brn, f-m; cht, wh, T
	1225	Sh, lt gr
	1235	Sh, lt gr
	1255	Sh, lt gr, sli silty
	1340	Dol, pale yel brn, f-m; cht, wh, T; sh, grn
	1400	Dol, pale yel brn, f; cht, wh, T