WELL SCHEDULE

US GEOLOGICAL SURVEY

IOWA DISTRICT WRD

WELL NO. 082-18W-27 DAD CO. Marshall

OWNER Laurel Town Well (1947) ADDRESS Laurel

DRILLER Leonard Shilhanek DATE DRLD Oct. 30, 1947

MAP

SOURCE OF DATA FILE

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

MASTER CARD - A

9-26-69
RP 1-26-73

STATE	COUNTY	LATITUDE DEG.	LATITUDE MIN	LATITUDE SEC	LATITUDE 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	64	41	52	50	N	092	55	27	1

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
	2	082	18	W	27	DAD	03073	//	LAUREL TOWN	M	P	W		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	SP. 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
		24	83	248		6ØC	94	7			1032	7	100	D	047		13			03									B

HYDROGEOLOGIC CARD - C

DUPLICATE CARD A CC 1-19	PHYS-IOG-RAPHY PROV.	SEC.	DRAINAGE BASIN	SUBBASIN	TOPO SETTING	MAJOR AQUIFER SYSTEM	SERIES USGS	SERIES IOS	UNIT	LITH-OLOGY	ORIG.	THICK-NESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	MINOR AQUIFER SYSTEM	SERIES USGS	SERIES IOS	UNIT	LITH-OLOGY	ORIG.	THICK-NESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	DEPTH TO CONSOLI-DATED ROCK	SOURCE	DEPTH TO BASEMENT	SOURCE	SURF. MAT. LITH-OLOGY	INFIL.	COEF. TRAN SIG. FIG.	COEF. TRAN X10	COEF. STOR. SIG. FIG.	COEF. STOR. X10-	LOG CARD DESIG.	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
	12	E	25C			M		X		L	6		0	240										240	C									C

CASING AND SCREEN (SIZE, TYPE, INTERVALS):

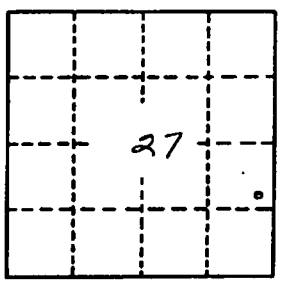
6" casing to bottom

CODED BY Essock 1st DATE 7-23-74

PUNCHED BY Allaire DATE 91774

VERIFIED BY DATE

SKETCH ON REVERSE: YES NO



WELL NO. 082-18W-27 DAD

WELL RECORD

Well is located ~~miles~~ N E W ~~S~~ and ~~miles~~ N E W ~~S~~ from In LAUREL (Nearest Town) in MARSHALL (County)

in the NE ¼ SE ¼ Sec. 29 T. 82 R. 18

Owner ..... Well No. .....

Postoffice address .....

Contractor .....

Address .....

Driller .....

Well begun Oct. 18, 1947

completed Oct. 30, 1947

Rig used—Cable, Rotary, Jet, or .....

Depth of well 248 (Feet)

Size of hole (note total amount of each size) 6"

.....

Main water supply at 248 (Feet below surface)

Final water head 100' (Feet above or below surface)

Is well pumped? .....

Yield 13 gal/min. (Gallons per minute)

Water level when pumping 100'-6"

Position of well ..... (Upland, valley, side hill, etc.)

W-3073

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

RECORD OF WELL

Location:

Town: LAUREL (N E / S W): County MARSHALL

SW¼NE¼SE¼ sec. 27 T 82 N., R. 18 W. Jefferson Twp.

Well name and number Town of Laurel Well (1947)

Owner Town of Laurel Address

Tenant Address

Contractor Leonard Shilhanek Address Tama

Drillers Leonard Shilhanek

Drilling dates Started Oct. 18, 1947; Finished Oct. 30, 1947

Well data:

Elevations: Drilling curb 1032 feet; Land surface feet

Reported to be about 15' below RR Sta by driller.

Determined by

Topographic position Upland

Total depth: Reported 248 feet, Measured feet

Drilling method Cable tool

Hole and casing data 6-inch casing to bottom.

Original depth to water 100 ft. above below land surface Date Oct 30, 1947

Original elevation of water level ft.; Source of data

Sources of water: Principal Sand & Gravel; Others

Production data: Date _____

Static depth to water 100' Measuring point Land surface
Pumping level 100'6" at 13 g.p.m. very little drawdown

_____ _____
_____ _____
_____ _____

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

Pump data: Type pump _____ Column Dia. _____ Length _____
Cylinder or bowls: Dia. _____ Length _____ Suction pipe _____

Power _____ Airline _____

Estimated rate of production: _____ g.p.m. for _____ hrs. a day
Use of water _____

WATER ANALYSES (in parts per million)

Date samples				
Sampled by				
Total solids				
Insoluble matter				
Alkalinity (Meo)				
Alkalinity (Phn)				
pH				
Fe_2O_3+ Mn_2O_3 +Al_2O_3				
Alkali as sodium				
Calcium				
Magnesium				
Iron (unfiltered)				
Manganese				
Nitrate				
Fluoride				
Chloride				
Sulfate				
Bicarbonate				
Hardness (ppm)				
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location _____

Sample range 25-248 No. spls. 43 No. dupls. & cond. 43 Fair
Spls. prepared by RKS Washed range. 235-248 by RKS
Driller's log and cond. Yes - Poor
Insoluble residues: Prepared by _____ Studied by _____ Strip log _____
Microscopic study 25-248 strip log 5-1-48
Gen. log _____ Correl. by R. Wehmer

Marshall Co

Mr. Hugh C. McCleery, Mayor
Laurel,
Iowa

Dear Mr. McCleery:

In reply to your letter of September 17, requesting ground-water information for the town of Laurel, we have examined the pertinent data in the open files of the Geological Survey.

Laurel is located in parts of sections 26 and 27, T. 82 N., R. 18 W., on the upland in southeastern Marshall County. The elevation at the M. & St. L. Railway depot is 1034 feet above sea level. We have based the tabular forecast which follows on this elevation.

Anticipated Geologic Section at Laurel, Iowa

Formation & Description	Thickness (feet)	From (feet)	To (feet)
Pleistocene system (sandy clay, sand and gravel)	220	0	220
Mississippian system			
St. Louis formation (sandy limestone and sandstone)	10	220	230
Keokuk-Burlington formations (cherty limestones and dolomites)	105	230	335
Gilmore City formation (colitic limestone)	20	335	355
Hampton formation (chert, limestone and dolomite)	80	355	435
Prospect Hill formation (siltstone)	15	435	450
McCraney formation (limestone)	10	450	460
Maple Mill formation (shale)		460	

Glacial drift of considerable thickness covers the bedrock at Laurel. The drift is composed, for the most part, of sandy and pebbly clay. Sand and gravel beds occur within the drift and usually at the base of the drift immediately overlying the bedrock. These sand and gravel zones are often water-bearing. The present water supply of Laurel may be derived from one of these sand and gravel beds. Shallow water-bearing beds are dependent upon rainfall for recharge and in dry periods are subject to failure. Deeper water-bearing sand and gravel beds, if present, would provide a more permanent supply. One or two test wells could probably test the extent and water-bearing characteristics of such a bed. Water from the deeper sand and gravel beds will probably be higher in iron and harder than the shallower supplies.

Deeper drilling into the Mississippian limestones and dolomites above the Maple Mill shale should encounter a sufficient supply of water. The town well at Gilman is reported to produce 110 gallons per minute from these rocks. The well at the Veterans of Foreign Wars club in Marshalltown is reported to produce 189 g.p.m. with a drawdown of 7 feet. Other wells in the vicinity of Laurel that derive their supplies from this system are reported to produce from 15 to 50 g.p.m. The static water level will probably stand about 175 feet below land surface at Laurel. The water will probably be harder than that from shallower horizons.

We will be interested in any drilling that is undertaken at Laurel. If you have any questions concerning this information or if we can be of further service, please let us hear from you.

Very truly yours,

H. G. Hershey

HGH:MCP:AEH

PEOPLES SAVINGS BANK

LAUREL, IOWA

SEP 18 1947

HUGH C. McCLEERY, CASHIER

Sept.17.1947

Mr. Hershey, Director
Iowa State Geological Survey
Iowa City, Iowa.

Dear Mr. Hershey; Re; Town Well

At the suggestion of F.W. Pickwoth, of the State Health Department who called upon us yesterday, we would like an opinion as to the chances of striking enough water to supply this small town of 250 people. Our present well is about 32 feet deep and 6 foot around and is connected to another well of 35 feet deep and 3½ around. These do not begin to furnish enough for the system installed this summer. These wells are located about a 1000 foot south and 350 foot west of the NE corner of the SW¼ of Section 27-82-18 Marshall Co. If we have to drill a deep well it woud be to our advantage to drill in this same location. We are very short of water and want to start on the new well as soon as it is wise.

Yours truly

Mayor

3073

9/62 pop. 235 (1962)
88 meters
all but 1 family
12000 gpd est. R. Coble

Name Laurel town well (1947)
Loc. SE NE SE 27-82N-18W, Marshall Co.
T.D. 248'
Drilled Shilhanek Oct. 1947
Log W-3073 Wehner
Casing 6" csg to bottom

$\frac{26.}{8} = 3.3 \times 10^{-2}$

Prod. data (reported 1962)

SWL	100'	90'
PWL	100' 6"	
Yield	13 gpm	

$8\overline{)26.00} = 3.25$ (24, 20, 16, 40)

$.5\overline{)13.0.}$ (26., 10, 30)

1032 − 100 = 932

Water analysis: No. 435 (1519) 8/26/59; No. 12248 (3526) 12/11/51

Remarks: Some water may be from Pleistocene?

Elev. 1032'

Formation	Depth	Top	Base
St. Louis	240	792	

52.2 gpd/per
230 / 12000 gpd
1150
500
460
400